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This special issue presents 15 papers presented at an invitational conference on the role of information in the economic development of the southeastern region of the United States: (1) "Three Days in February: A Summary Report on the Role of Information in the Economy of the Southeast Conference" (Joel Sigmon); (2) "Impressions of the Conference on the Role of Information in the Economy of the Southeast" (Ron Steensland); (3) "Notes on Expanding the Ideas from the Conference on Information and the Economy of the Southeast" (David L. Kallenborn); (4) "Reflections from a Participant" (Jeff S. Thompson); (5) "Keynote Speech" (David Osborne); (6) "The Future of Economic Development in the Region" (Jesse L. White, Jr.); (7) "The Economy of the Rural Southeast" (Rick Carlisle); (8) "The Economy of the Urban South" (Roy Bahl and David Sjoquist); (9) "Visualization and Information: Computer Images" (Earl R. Mac Cormac); (10) "Information and the Development of Rural North Carolina" (Howard McGinn); (11) "Meeting AT&T's Needs for Information" (W. David Penniman); (12) "Overcoming Political and Financial Barriers" (Barratt Wilkins); (13) "Implementing Change in the Development of an Information Infrastructure" (Ralph Russell); (14) "Raising Anchor, Casting Off: Information Technology and Economics in the Southeast" (Jerry Campbell); and (15) "Closing Remarks: An Overview of the Conference and a Look to the Future" (Edward Holley). (MAB)

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2. News releases, newsletters, clippings and journals from libraries, state associations, and groups throughout the region may be used as a source of information.
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#1 Spring	February 15	May
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#4 Winter	November 15	February

President's Message

This is a very special edition of *The Southeastern Librarian*. Numerous articles and studies have been produced regarding the economic projections for our region, but few have included the important role of information. Virtually every report on trends in America indicates that, in some vague way, information and service industries are key components of our future. But, few have analyzed the real economic impact of information.

This special issue deals specifically with the role of information in the economy of our region. If information is to be of importance, so also should be libraries and education. There are many challenges ahead, and it is important that we be prepared to serve the needs of our region.

Compiling this study has required a great deal of work by many individuals and agencies. Detailed information regarding the contributors is mentioned elsewhere. However, I do want to express special appreciation to Elizabeth Curry for her coordination of this special edition, and to those who worked with her. Special appreciation also goes to OCLC which jointly funded this issue, and without whose assistance this publication would not have been possible.

In our last issue I reported the suggestion that some sort of regional platform be developed for the White House Conference. The White House Conference representatives for each state in SELA have been contacted, and most have responded. The consensus of their remarks is that each state needs to address its own needs through the various state conferences, and that a regional platform not be manufactured. If (at the end of the state conferences) there are found to be common threads, those threads should be woven into a joint statement of concern. For this purpose we have scheduled a White House Conference meeting during our conference in December. By that time most states will have completed their local meetings, and we can examine the possibilities for a statement of regional concerns.

Speaking of special things, this issue brings you the first glimpse at our 1990 conference in Nashville. Wow!! Jim Ward and his many committee workers have done a spectacular job. The program looks outstanding; the accommodations are going to be absolutely first class; the exhibit area is almost sold out. This is going to be a conference to remember, and you need to be there. Elsewhere in this issue, Jim provides information on the conference and a guide to "Music City."

You will soon receive (and may already have) registration and housing information. You need to respond quickly. The Opryland Hotel is one of the world's largest convention facilities, but other meetings will be there at the same time as our conference. If you have any doubts that you want to stay in the conference hotel, let me settle your mind. You do want to stay in the conference hotel. You will miss much of the conference's theme if you are away from the main activities. But, you will be able to stay at Opryland only if you respond quickly.

In addition to our conference, many state association meetings are scheduled for the last quarter of 1990. Just ahead are the meetings for West Virginia, South Carolina, Kentucky, Mississippi, and Virginia. One of the most rewarding aspects of being your President is the opportunity to visit the various state association meetings, and to represent all of you to them. It is my plan to attend each of the upcoming conferences. However, I have gained a new appreciation for the problems of exhibitors. Sometimes it is just not possible to be at two places at the same time.

It is hard for me to believe that I am now in the last few months as SELA's President. This has been a fast two years and a wonderful experience. I cannot begin to adequately thank you for your support and kindness.

George Stewart

Editor's Musings

It is a pleasure to bring this special issue of the SOUTHEASTERN LIBRARIAN to the members of SELA. It is based on an invitational conference, The Role of Information in the Economic Development of the Southeast, which was held in February and sponsored by OCLC, SOLINET and the State Library of North Carolina. (See the Introduction to this issue by Clarence Walters for further information.)

This issue of SELn embodies the spirit of cooperation which is vital to growth and development. Collectively we can synthesize our knowledge, skills and resources to accomplish much broader and more far reaching goals than we can achieve alone. It may be easy to give lip service to cooperation but implementation requires a great deal of planning, patience and communication—as many of you who are active in SELA know so well. It is important to acknowledge those who contributed their time, energy and resources to this special issue of SELn.

ACKNOWLEDGEMENTS

OCLC deserves our sincere thanks for providing the generous funding necessary to double the length of this issue and to print additional copies for national distribution. Clarence Walters spearheaded the project and worked closely with me to negotiate the arrangements. He deserves credit for his high level of cooperation and his adherence to SELn production deadlines.

The conference speakers took time to share their expertise and to submit articles based on their presentations. The quality of their work and the extent of their knowledge are impressive. The conference received rave reviews from the attendees. I am pleased that three participants representing a cross section of the audience—a librarian, government official and business representative—agreed to share their impressions with us.

We also owe our appreciation to the members of the Conference Planning Committee and the staff members of the State Library of North Carolina, SOLINET and OCLC who made the event possible. The people behind the scenes are crucial to the success of any venture.

The reviewing, editing and proofreading of the speeches or articles was also a collaborative effort. Katharine Calhoun (1989-90 SELn Associate Editor) returned to assist us. Steve Baughman, Liz Hornsby and Sandra Williams from SOLINET also worked with Raylynn, David and me. In most cases we were able to maintain the flavor or style of the presentations, but some informal remarks were not included. A few of the speakers revised their comments and prepared articles specifically for SELn.

SELA BIENNIAL CONFERENCE

The next issue of SELn should be published in early December so this is your "pre-conference issue." Jim Ward and Pam Reese bring us a sneak peek at conference plans and local sights. You should receive your schedule and registration packet at about the same time you receive this journal. Jim Ward and the program planners have worked hard in the past year to bring SELA members an outstanding line-up! Pam Reese has compiled a guide to the cultural and recreational opportunities in Nashville, so we know it will be a fun conference as well as productive or educational!

LOOKING BACK—LOOKING AHEAD

Due to space constraints I have not included the "Looking Back" column in this issue. Sometimes I am fascinated by the past issues and hot topics from twenty years ago, but lately I'm having trouble just keeping up with what happened since the last quarter. Spring conferences were held in Louisiana, Tennessee, Alabama and Florida. My SOLINET colleagues attended all of the events, so I heard all kinds of reports and reactions. The only event that I was able to attend was the Florida Library Association Conference. Let me know if you have attended a conference and heard a speaker whom you would recommend to another state. I'm thinking of an occasional column to help all the program planners in the Southeast who are in search of "just the right speaker."

The **Louisiana Library Association** held a joint conference with the Louisiana Association for Educational Communications and Technology focusing on "Literacy and Information for Tomorrow." I hear that the hospitality in Monroe, Louisiana, was as warm as it was last year in Baton Rouge! The **Alabama Library Association** met at a relatively new site in Orange Beach near Gulf Shores with the theme of "Cajun Kaleidoscope: Look What's Cooking on the Coast." The group cooked up lots of special programs from keynote speaker (regional storyteller, folklorist, humorist and television personality) Justin Wilson to Dr. Bernard Vavrek from the Center for the Study of Rural Librarianship. The **Tennessee Library Association** met in Nashville with the conference theme of "Tennessee Connections: Unity in Diversity." Marilyn Gell Mason, Director of the Cleveland Public Library, was the TLA keynote speaker who addressed "Financing Library Service." Tipper Gore, author of *Raising PG Kids in an X Rated Society*, and Robert Newton Peck, author of 46 books and creator of 35 television specials, were also featured presenters. The **Florida Library Association** held the 67th annual conference in Daytona Beach. Linda Crismond, the Executive Director of the American Library Association, spoke at the first General Session. Linda Crismond is also scheduled to address the SELA Biennial Conference and you don't want to miss that program. It will be an opportunity not only to learn more about ALA plans but also to demonstrate the vitality and strength of the Southeastern states and our need for representation by ALA.

Elizabeth Curry

Introduction

Conference On the Role of Information in the Economy of the Southeast

In July 1991 the second White House Conference on Library and Information Services will be held in Washington, D.C. The conference will have three major themes: Library and Information Services for Democracy; Library and Information Services for Literacy; and Library and Information Services for Productivity. This last theme grows out of an awareness of the critical importance of information and knowledge to the economic vitality of the country and in its ability to continue to compete effectively in what has become a global economy. Over the past several years there has been increasing interest by librarians in how they can best position themselves to serve the business and economic interests of their communities, how they can determine the specific information needs of businesses and economic development agencies, and how they can make business and government leaders aware of what libraries can provide to assist them.

With this as background, discussions between the North Carolina State Library, The Southeastern Library Network (SOLINET), and OCLC began in 1988 to determine how this question could be best addressed on a regional basis. The Southeastern United States appeared to give a good basis for examination of the role of information in an economy that had generally common elements and was in a significant process of transition. The governors of the region had recognized this commonality a number of years ago when they created The Southern Growth Policies Board, an agency whose purpose is the continued economic development of the Southeastern states. Coincidentally, with the exception of two states, the makeup of the Southern Growth Policies Board is contiguous with that of SOLINET. These early discussions led to a decision to hold a conference in the region which would draw together representatives of government, business, and libraries to discuss the role of information in the economy of the Southeastern states.

A steering committee was formed composed of Patricia Breivik, Associate Vice President for Information Resources, Towson State University; Frank Grisham, Executive Director, SOLINET; Howard McGinn, Director, North Carolina Division of State Library; James Nelson, State Librarian, Kentucky Department for Library and Archives; Barratt Wilkins, State Librarian, State Library of Florida; and Clarence Walters, Director, Member Library Relations, OCLC. At the first meeting the steering committee decided that the states in the region would be asked to send teams composed of representatives of business, government, and libraries. The goal was to have equal representation from each group. The actual distribution turned out to be 50% librarians and 25% each of business and government representatives including five elected officials.

The objectives of the conference were to assist each participating state to improve its support of economic and business development by:

—Increasing awareness of the current economic and business climate of the region
—Learning about information needed to support economic and business development
—Sharing experiences in planning for and implementing information infrastructures for economic and business development
—Developing strategies to make more effective use of existing information systems
—Exploring cooperative approaches to meeting the states' economic development information needs
—Establishing a regional means to monitor information activity of the states in the region.

State library agencies in the region responded enthusiastically to the conference. Eight states from the region were represented at the conference with a good representation of the different interest groups. Those attending the conference identified many beneficial aspects of the conference, but the one mentioned by almost all was the opportunity for the different groups to meet, in most instances for the first time, to discuss issues of mutual interest and concern and to exchange ideas.

The best assessment of the conference will come from those who participated in it. Their evaluations were overwhelmingly positive about the experience and its potential benefit to the individual states. Another measure of the success is the follow-up activity in the states. Since the conference, many of the states have held follow-up meetings to discuss in more detail issues raised at the conference. Several states have begun the process of building strategic alliances within the states among the business, government, and library communities. Some states have initiated the process of conducting audits of state information resources. Most are looking at how they can work more closely with government and businesses to help provide access to information necessary for business and economic development.

The success of this conference can be attributed to many including a large number of staff at the three sponsoring agencies, the steering committee, the State Librarians in the region, and the many superb speakers. Ultimately, however, the final credit for success rests with the many enthusiastic and dedicated participants who took the time to listen, learn, debate, and exchange ideas. They are the ones who have helped to carry the message back to their states and will serve as the nucleus for whatever goes on from here.

Clarence Walters, Director
Member Library Relations, OCLC

Three Days in February: A Summary Report on The Role of Information in the Economy of the Southeast Conference

Joel Sigmon

"To honor the past is one thing; to prefer it will cost us our future." These words of noted North Carolina author Doris Betts quoted by one of the conference speakers set the tone for a remarkable three-day event in North Carolina, February 1990. Library and information professionals joined business and government leaders in Research Triangle Park, North Carolina, to examine the new economy in the Southeast and its relationship to information production and dissemination. Formal presentations, discussion groups, and meal-time sessions were incorporated into a carefully designed agenda that offered the greatest opportunity for the exchange of ideas. Not only did the conference stimulate ideas, but it initiated a dialogue among the three groups involved that will carry through the upcoming White House Conference and into the future at the local, state, and regional level.

DAY ONE: THE STAGE IS SET

Let the Dialogue Begin

In the opening session, Dr. K. Wayne Smith, Chief Executive Officer of OCLC, Inc., put forward six basic truisms to establish a framework for the conference: (1) information can and is improving the quality of business decisions; (2) information is growing dramatically (for example, medical knowledge is doubling every eight years); (3) there is an expanding global information network; (4) the Southeast business community is part of a global marketplace, competing with foreign countries that provide low-cost labor, land, and taxes; (5) we live in an information-based society where information is replacing raw materials as the cornerstone of business; (6) new, challenging, and well-paying jobs are being produced by the global information network.

Accepting these truisms suggests that an aggressive change in Southern strategy is needed to cope with today's economic circumstance. Embracing the postulates of Dr. Smith, the participants joined with colleagues from their own states for the conference's first series of discussion groups. These sessions allowed each state group to review the conference agenda, identify areas of special significance to their states, and discuss ongoing initiatives.

The North Carolina delegation's session was representative of the discussions. In its first session, the North Carolina group engaged in a hard-hitting analysis of the problems with a sense of urgency and energy. Howard McGinn, State Librarian of North Carolina, served as group facilitator and others quickly joined in the discussions. One participant suggested that the stereotype of librarians as book pushers must be swept aside. Another suggested that business and government leaders cannot remain ignorant of their need for information, how to access it, and how to use it. The information community must do a better job of marketing its services and taking the message directly to its customers through aggressive and carefully planned strategies that employ innovative techniques of management, promotion, and salesmanship. Information professionals must carefully examine ways to package information to improve its usefulness and marketability. There is a voracious market for information in business and government that has not been recognized by information providers.

Concerns were expressed by the North Carolina delegation about literacy and general educational level. Participants felt that part of any information strategy must address the need for the improvement of general education. The group cautioned that an information-rich versus information-poor situation must be avoided.

The North Carolina delegation also noted that information is not free and, in fact, is getting more expensive. Without a proper and sophisticated information infrastructure, the task of providing the needed information to business, government, and the general public is insurmountable. A practical approach to developing an infrastructure is desirable. Available models should be studied and emulated. Existing local, state, and regional databases should be inventoried, and access to these should be examined. Turfism that denies access and dissemination of needed databases must be overcome.

The New Economy

Keynote speaker David Osborne, author of *Laboratories of Democracy*, brought the first day to a close by presenting his vision of the new economy. According to Mr. Osborne, the industrial economy is dead, replaced by the birth of a knowledge-based economy. The economy is constantly changing. It is based on industrial intelligence; it is driven by entrepreneurship, and it is no longer based on high volume and low cost, but on quality and innovation. Manufacturing is rapidly migrating to third world countries because of cheap labor and other lower operating costs. American business can compete only through innovative and technology-based processes where the most valuable resource is innovative people. Four key elements needed in the information economy

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are: (1) excellent public education, (2) venture capital, (3) sophisticated information systems, and (4) technology-oriented institutions of higher learning that work closely with business.

DAY TWO: INFORMATION AND THE ECONOMY, PAST AND PRESENT

The Changing Economy of the Southeastern United States

In presenting an historical view of the Southern economy, Jesse White, former Director of the Southern Growth Policies Board and presently on the faculty of Harvard University, pointed out a distinction between economic growth and economic development. Economic growth produces short-term gains while economic development creates the capacity to generate self-sustaining growth. Based on an industrial policy of branch plant recruitment, the South has experienced enormous economic growth since the depression era. However, economic development has not been pursued in a sustained manner. The practices followed by Southern states have led to a mind-set that industrial recruitment is synonymous with economic development, thereby obviating the development of venture capital for entrepreneurial and innovative enterprises.

In his discussion of the economic performance of the South, Roy Bahl (Director, Policy Research Program, College of Business, Georgia State University) called for a reassessment of public policy issues, particularly by state governments. He suggested that state legislators do not recognize the new economy. The present antiquated tax policy must be replaced by a policy that recognizes the service-based economy. Spending for public education is woefully inadequate and government must deal with the growing poverty levels and resulting socioeconomic consequences. One approach to at least understanding the problem is to make better use of existing data. Libraries are well-positioned to take on the function of organizing, packaging, and distributing this data that is so crucial to public decision-making.

The Information Needs of Business and Government

Group sessions following the historical overview divided the conference participants into business, government, and library groups to provide an opportunity for representatives with similar interests and backgrounds to discuss information issues. The discussion of Business Group One was representative of these sessions. Conversation centered around three major issues: the marketing of information, the timeliness of information, and the need to change the perception of businesses about libraries. There was a consensus among the business representatives that aggressive marketing efforts from libraries are required. Many businesses, especially small businesses, do not yet recognize the value of information, how to access it, and how to use it. They certainly do not understand the expanded role of libraries in information dissemination. Businesses want librarians to promote their services to them. They also want librarians to repackage information, which in some cases means interpreting the data. Competition in the business community further demands that information be timely. The timeliness factor makes electronic databases the critical element in providing the needed information. Finally, librarians must change their image and they must do it quickly. Seminars, exhibits, and sales calls aimed at the business market to educate users about the library and promote its services are desperately needed.

New Technology Means New Responsibilities for Librarians

The luncheon speaker, Dr. Earl R. Mac Cormac, Science Advisor to North Carolina Governor James Martin, and Executive Director of the North Carolina Board of Science and Technology, continued the theme of the librarian's expanded role in his unique presentation. His talk, "Visualization and Information: Computer Images," proclaimed that the role of librarians is no longer passive. Technology has dictated that the librarian is now an active participant in the development of knowledge. Computerized image processing affords new opportunities to convey information that can be added to existing computer-based information sources. The task is not an easy one. Librarians will have to cope with the complexity of the technology, ranging from storage problems to information processing. At the same time, the power of the technology to communicate and educate far more effectively than the written word also suggests new ethical responsibilities for librarians.

Information Infrastructure Models

Two existing state systems that support the information needs of economic development were described to all conference participants in the afternoon. Thomas Clark, Vice President, Greater Denver Chamber of Commerce and Group Manager, Denver Metro Network, discussed the Denver Metro Network and its contribution to economic development in Colorado. Howard McGinn, North Carolina State Librarian, described the North Carolina Information Network and its success in meeting information needs in his state.

The Metro Denver Network is a computerized information system linking companies and local government agencies to eliminate duplication and lack of communication in economic development efforts. The system consists of electronic bulletin boards, a directory, and editing component, e-mail, prospect files, and a gateway to information databases. The system has been very successful in targeting industries for marketing strategies, resulting in successful business recruitment and sustained economic growth for the region.

The State Library of North Carolina initiated the North Carolina Information Network (NCIN) in 1986. Using state-of-the art computer and telecommunication technologies, the network links users to a variety of information sources that are worldwide in scope. The cornerstone of NCIN is access to OCLC for interlibrary

lending. Other components of the network include e-mail, electronic bulletin boards developed by the State Library in cooperation with other organizations, and access to over 800 electronic databases. Mr. McGinn demonstrated North Carolina's automated purchase and contracts directory that is updated twice a week on NCIN. The availability of this information has significantly enhanced the ability of small firms to compete for the state's business.

Fostering Cooperative Information Collecting and Sharing

State delegations met in the afternoon to identify opportunities for further information infrastructure development to support the business and economic interests of their states. A representative from each state group was selected to meet later in the evening to discuss the approaches to be presented to the full conference the next morning.

AT&T'S Solution

Following the evening meal, David Penniman, Director of Libraries and Information Systems, AT&T Bell Laboratories, reported on AT&T's solution to meeting the information needs of its employees. The success of AT&T's library and information service is built upon a clearly defined vision. Information resources are regarded as strategic assets that provide a competitive edge for the company. Mr. Penniman stressed the importance of leadership rather than traditional management practice as the essential ingredient for success. Leadership resides anywhere in an organization where there exists vision and passion. It is not limited to the upper levels of management. From a marketing perspective, the essential challenge to today's libraries is to discover how to maintain excellence in a changing environment when survival depends on satisfied customers. A key is the continuous monitoring of customer satisfaction. Libraries should further strive to become learning organizations where the adaptability of the staff to the constantly changing environment and the willingness of the staff to market services are more important than educational backgrounds. Only an appropriate blend of physical, human, and electronic resources can ensure success.

DAY THREE: RAISING ANCHOR, CASTING OFF

Overcoming Barriers

On the final day, three speakers examined possible hindrances to the development of information infrastructures and how they can be overcome. Donald Muccino, Vice President for Research and Development, OCLC, discussed the technical barriers. He views the overcoming of technical barriers as a management problem. Today's managers must recognize the rapidly changing technology and its implications. They must cope with a three to four-year lifespan for equipment, manage overhead costs, strive for software and hardware compatibility, and position their organizations to add value to high-tech products and services. Barratt Wilkins, Florida State Librarian, suggested that an effective partnership of government, business, and information professionals is the key to overcoming political and financial barriers. Ralph Russell, University Librarian, Georgia State University, emphasized the importance of managing change successfully in overcoming the human barriers.

Looking to the Future

Trends, directions, and opportunities developed from the previous day's discussion groups were presented by three speakers selected from the state delegations. Jerry Campbell, Vice Provost for Library Affairs and University Librarian, Duke University, served as moderator. Dr. Campbell opened the session with an ominous metaphor of the information age as a "gathering storm" in which we must be poised to "raise the anchor and take the helm to weather the storm and take control." Dr. Campbell suggested that there is no limit to information growth. Information is infinite and feeds upon itself. Libraries are successful not because they collect everything, but because they know what to collect for certain constituencies and, equally important, how to deliver it.

Ron Dubberly, Director of Libraries, Atlanta/Fulton County, Georgia, described the Georgia strategy as a process of four distinct phases: dissemination, discovery, design, and development. Sylvia Lovely, Director of Intergovernmental Services, Kentucky League of Cities, advocated a state strategy that focuses on harnessing existing resources and identifying constiuency groups. With the State Library assuming a leadership role, she suggested a grassroots effort in Kentucky to establish local task groups that would take up the discussion of linkages among business, government, and information providers to facilitate economic development. Chuck Fienning, Vice Chairman, Sumter County Council (and a small businessman), proclaimed to the group that politicians and businessmen/women are light-years behind librarians in understanding the information age. He advised librarians to concentrate on serving as teachers and innovators and not to get involved directly in the political process, looking instead to friends groups and library board members as political allies. Efforts should focus on marketing library services and increasing the customer base while emphasizing frugality.

Conference Accomplishments

Dr. Edward Holley, William Rand Kenan, Jr. Professor, School of Information and Library Science, University of North Carolina, eloquently summarized the accomplishments of the conference at the luncheon meeting.

- The conference dealt with the realities of Southern society. Data were presented on the demographic and

economic climate of the region, not just overviews, but hard data on where we stand in relationship to government and business.

- The problem of illiteracy was discussed, including the problem of those who do not understand the value of information, where to find it, and how to use it.
- Marketing programs are strongly recommended to inform government and business of library services.
- The importance of leadership was strongly proclaimed, with the emphasis on visionary rather than charismatic leadership.
- Libraries must recognize that they are in the customer business.
- All three groups need to take advantage of what already exists. Rethinking, retraining, and willingness to cooperate are needed along with vision and persistence.
- The conference participants recognized that we must provide information together. Libraries frequently talk more about cooperation than they engage in cooperation.
- The development of an information infrastructure is among the most difficult tasks and cannot be done without private-public partnerships.
- Access to information through technology is the key to further development and progress, with telecommunication networks serving as the highways of tomorrow.

The Central Task in Providing Information for Economic Development

Information must be organized to maximize its impact on economic development. The traditional tendency is to develop information systems based on the capacity of institutions, which may or may not be relevant. Instead, specific needs must be discovered and the information must be provided in a form that is usable. Information must also be available in the place it is needed at the time it is needed. The goal is a user-driven, user-friendly information system. Dr. Holley's remarks in one of the North Carolina sessions summarized the fundamental problem. The key is "how do people get to know where information sources are." Solving the fundamental problem requires a "united front, an information infrastructure based on cooperation from many groups." With those remarks, the fostering of a cooperative spirit of interdependence became, perhaps, the greatest accomplishment of the conference.

On the Planning Committee for the conference were (center) Clarence Walters, OCLC; and (left to right) James Nelson, Kentucky State Library; Howard McGinn, North Carolina State Library; Frank Grisham, SOLINET; Patricia Breivik, Towson State University; and Barratt Wilkins, Florida State Library. (*Photo: Arno Zielke.*)

Impressions of The Conference on The Role of Information In The Economy of The Southeast

Ron Steensland

For two days in early February of this new decade forty librarians and thirty-five leaders from the business and government sectors from eight Southeastern states met in Raleigh, North Carolina. Our goal was to encourage each state to improve support of economic and business development.

The conference was well organized and was one of the most tightly run I've ever attended. Speakers began and ended on time! Clarence Walters, OCLC Director of Member Library Relations had to crack the whip a few times, but he did so with grace and good humor. Events lent themselves to formal and informal dialog with colleagues and the leaders from government and business. It was obvious much thought had been given to the planning of the format by the sponsors, SOLINET, OCLC, and the North Carolina State Library.

A key feature of this conference was the state group meetings. This provided an opportunity for the representatives from each state to review the agenda and to identify issues of special significance to their states. The group meetings also allowed for the opportunity to examine and discuss initiatives underway within each state. In these meetings I learned about the many information resources available within Kentucky state government—resources such as specialized databases, publications, and lists which currently exist—but resources which are not indexed or cataloged for statewide distribution. This is not just a problem in Kentucky; it exists in other Southeastern states, but few have approached a solution. During the session on Information Infrastructure Models we learned Howard McGinn, North Carolina State Librarian, has a legislative mandate to collect and assemble this type of information and to make it available to the citizens of his state. Also in this session we learned how Colorado approached this problem by developing the Denver Metro Network for an urban environment.

Jesse White, former Director of Southern Growth Policies Board, provided an enlightening overview of the economic and business conditions of the Southeastern United States. Of particular interest was a review of the problems(opportunities?) related to economic and business development, the current and future work force, and the needs of the Southeast to meet the business and economic challenges of the future. Special examinations were presented on the rural economy by Rick Carlisle, Vice President of the North Carolina Rural Economic Development Center, and on the urban economy by Roy Bahl, Director of the Policy Research Program at the College of Business, Georgia State University, and by David Sjoquist, Senior Associate, Policy Research Program at the College of Business, Georgia State University. This session really set the stage for future discussions among the state groups.

The speakers were to a person, outstanding. Computers, databases information technology, and their impact on state business and economic development planning and decision-making were a common thread running throughout the presentations. These topics together with human, technical, political and financial hindrances were skillfully woven together to provide the background tapestry to understand the information infrastructure of our Southeastern states. David Penniman, Director of Libraries and Information Systems, AT&T Bell Laboratories, was particularly articulate as he discussed the factors involved in meeting AT&T's need for information. We public librarians think we deal with demanding publics—apparently we haven't lived until we have dealt with time-sensitive, proprietary research requests from pressured Ph.D.s!

However, lest the reader think all the good speakers were from the private sector, Barratt Wilkins, State Librarian of Florida, and Ralph Russell, University Librarian at Georgia State University, left the audience rolling in the aisles with laughter during their talks on political/financial and human barriers to the development of information infrastructures respectively. This was a road show that would play in Peoria!

A solid plus to the conference was the session in which each state team designated a representative to share with the entire conference the approach developed by each state group—to identify opportunities for further information infrastructure development in support of the economic and business needs of the state. Out of this session came the realization that libraries of all types have a role to play in this process. If business and government leaders cannot depend on their libraries to supply accurate, up-to-date information for their economic development needs, they will turn to alternate information brokers, and libraries will suffer. After talking with the business leaders present, I am convinced we are viewing our own mortality. We must wake-up and smell the coffee!

My personal favorite was Dr. Edward Holley, the William Rand Kenan, Jr., Professor, School of Information and Library Science, University of North Carolina. Ed was a positive influence on my early career development, and his good-natured objections to being called "The Pope of Librarianship" by his introducer brought back fond memories of my years in North Carolina. Ed's overview of the Conference at the final luncheon provided the finale to one of the most interesting experiences of my professional career.

Ron Steensland is the Director of the Lexington Public Library, Lexington, KY 40507-1376.

Kentucky conference delegation

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Notes on Expanding the Ideas from the Conference on Information and the Economy of the Southeast

David L. Kallenborn

The basic theme of the conference was the role of libraries in providing public access to data. The specific focus was on using information technology to provide access to computer databases that will be useful to the public. Further, this scope was narrowed to focus on economic development data and the business community's use of that information. As a result of the subjects discussed at the conference, it is useful for each state to review the major issues relating to public access of computer databases. Some of those issues that need to be addressed in Florida are discussed below.

Identification of Available Data

Almost every public agency produces data records in the process of carrying out its mission. Today these records are frequently stored in electronic databases and in some cases may only be available through computer access. In Florida, the Information Resource Commission maintains a list of databases reported by agencies in their agency *Strategic Plan for Information Resources Management*. Additionally, the Growth Management Data Network Coordinating Council is developing an automated data dictionary of growth management databases maintained by its members. Other functional groups of agencies such as Criminal Justice and Children at Risk have developed data models that are useful in identifying sources of data. These major reference sources of state databases are useful for identification of the owners of the data as well as for evaluating the specific relevance of the data for your use.

Life is Never Simple—Dealing with Dirty Data Problems

At this point in Florida, only the Corporate Filings database and the Driver's License database are available to the public from commercial data vendors. The Department of Commerce has databases on local economies and comparisons of Florida's economy with other states that are available to the public through access to their system. Other databases require investigation to identify the location of the data and then require that technical arrangements be made to access the data. Many computer systems still process data in "batch" mode, which means that the data cannot be directly accessed by a terminal or PC. In these cases while the data may be collected and maintained by an agency, it will be necessary to have a computer program written to retrieve the data needed.

David L. Kallenborn is Assistant Executive Administrator, Information Resource Commission, State of Florida.

Even though a database is online, you may not be able to get to it. Most data is collected for a specific regulatory or other mission-oriented purpose. Public records are often a by-product of the agency data collection effort. Computer systems have historically been developed with the purpose of meeting the mission of the agency and not for accommodating public access to files. For these reasons, even if a database is available online, it may not be very *user-friendly* for public access. Options such as browsing and downloading to a PC may not be available.

You need to know your data. Standards for data definition, database design, and access software need to be coordinated with agencies participating in data exchange. In many cases, the title of a data set will sound like what the user needs. However, upon investigation the users may find that the method of data collection or some other aspect of the data makes it unsuitable for their purposes. An example might be Department of Transportation traffic counts. On the surface this sounds like a good source of data for a traffic flow analysis. Upon investigation the user will find that the state Department of Transportation surveys only certain select locations on state and U.S. highways on a regular basis, and the data will only be meaningful if the user is interested in one of those locations.

The really good data is often confidential. Frequently the data that would really be useful to a user is very specific data about people and their location. Just as frequently, these specific records are protected from public review by laws that protect the confidentiality of the individuals. This data can often be aggregated to protect the individual records and still provide useful data to the public.

This list of caveats is not meant to infer that public access to data is a lost cause. What it does suggest is that this is a complicated business; frequently, the expectations of the user can be set at unrealistic levels if we are not careful. It also suggests that careful planning can provide a public access system that delivers all that is promised.

What Can Technology Offer?

User-Friendly Interfaces: Personal computers are getting easier to use and will require less training as systems such as the Apple MacIntosh, IBM Presentation Manager, and X-Windows are further developed. The direction of the personal-computer-user environment is moving to object-oriented commands to make the functions of the computer easier to understand. Public access uses of the computer will be less complicated for the untrained user.

Advanced Data Shortage: Compact Disc-Read Only Memory (CD-ROM) is a current technology that offers great promise as a medium to distribute large public databases. One CD-ROM can hold the equivalent of 300,000 pages or 1,500 360K floppy disks. A central center could produce the CD-ROM discs and distribute them statewide. This might be a cheaper alternative than a dedicated network to all locations.

Geographic Information Systems (GIS): GIS may well be the technology of the 1990s. Much of what government does relates to land use or categorization by geographic boundary. GIS provides a means of drawing electronic maps with overlays of information about topics of interest. GIS also provides a means of identifying a geographic location with data that an agency manages. Many of the issues and questions the public will be interested in can be quickly displayed with a good GIS.

Videotex and Hypertext Applications: Several types of documents lend themselves to access through Videotex and Hypertext technology. Documents such as statutes, administrative code, and state publications can be entered and displayed or accessed in their original formats. This technology lends itself naturally to public access due to its ease of use and the volumes of information that can be managed.

Vision For The Future

If we look at where we should be in the future, it seems that libraries play a key role in public access to computer databases. The public library system provides a network of convenient points for the public to gain access to public records and databases. The addition of computer access in every public library immediately adds significantly to equalizing the information available to even the most remote part of the state. Since public libraries have a tradition of free access to information, computer access to public data is a natural extension of services already provided. This vision of comprehensive access to public data through the public libraries can provide a good model for planning actions that will lead us toward that goal.

Reflections From A Participant

Jeff S. Thompson

The Role of Information in the Economy of the Southeast Conference, Research Triangle Park, Raleigh, North Carolina, was very enlightening for me. Being a non-librarian, I was very interested in the *technologies* of information delivery. Here are a few reflections on the conference.

Several presentations on information changes and technologies associated by non-librarians made it clear that information will be the catalyst for the 1990s and the 21st century. Dr. Jesse White, Jr. discussed several strengths of the Southeastern states. Dr. White demonstrated how all of these strengths as well as many of the solutions to our weaknesses revolve around information and its delivery.

Thomas Clark's discussion of the Denver Metro Network system and how it has aligned 47 municipalities and economic development agencies was most fascinating. The ability to align the strengths of each of its members in the economic development process while providing a very flexible system is not frequently achieved.

The Chamber of Commerce of Huntsville/Madison County is currently providing extensive information to numerous requestors. Our competitive advantage increases as response time is reduced and the information is more timely. Responses must be accurate, complete, and appropriate for the company. Our challenge is to ensure we have the systems to provide the right information at the right time to the right people (the decision-makers).

In conclusion, the conference opened my eyes in many ways. The opportunity to share experiences as well as a look into the future with such a distinguished group was a real pleasure. I feel the knowledge gained will impact all who attended in both measurable and immeasurable ways for some time to come.

Jeff S. Thompson is Director, Small Business Development and Research, Huntsville, Alabama 35804-0408.

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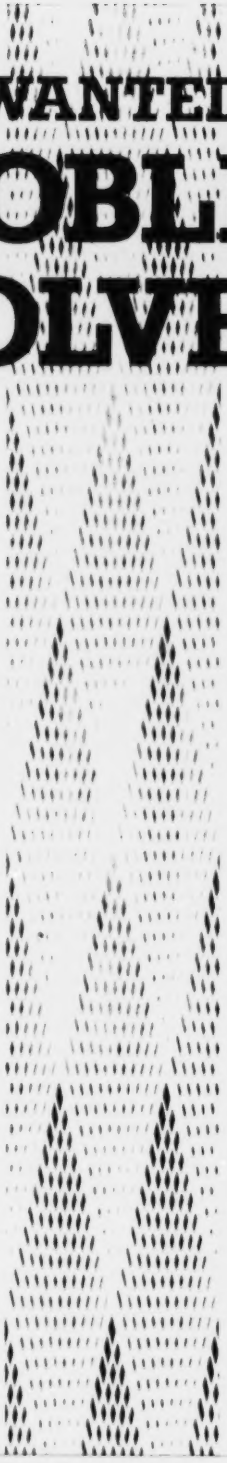

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Keynote Speech: The Role of Information in the Economy of the Southeast

David Osborne

It is a particular pleasure to be asked to talk at a conference on the role of information in economic development. I think the very fact that such a conference is taking place is a sign of how much the world has changed over the last decade. Ten years ago—even five years ago—no one would have thought to put the two together. But clearly, there is an intimate connection between information systems and economic development. If those of you who are information specialists can help make relevant information available to people involved in business and economic development—in a user-friendly, compact, timely form—you will have performed a tremendous service.

I want to talk about three things:

1) the new economy and its implications for economic development
2) two examples of what states have done to take control of their economic futures
3) the role of information in this process

Let me start with the new economy. I think all of you know that the reason we're here, the reason why economic development has become such an obsession in the 1980s is that our economy has undergone a profound and painful transition over the past ten to fifteen years. We have experienced nothing less than the death of the old industrial economy and the birth of a new economy. Whether you call that new economy a post-industrial economy, information society, micro-electronic age, or an entrepreneurial economy, it represents a transition as profound and fundamental as the birth of the industrial economy almost one hundred years ago. And like that birth, it has changed the face of America.

You're all familiar with the basic concept, I'm sure. Rather than repeating the arguments, I want to just throw out a few statistics that I think bring the magnitude of that change home particularly well:

- In 1960, 20% of American goods faced active foreign competition; by 1980, 70% did.
- In the 1950s, 70% of Americans who had jobs did manual labor; 30% worked with their minds. Today that ratio is nearly reversed.
- In 1950, Americans created 100,000 new companies; in 1985, nearly 700,000.
- Between 1980 and 1986, America's 500 largest corporations lost three million jobs while companies with 100 or fewer employees created 10 million.
- Fifteen years ago, the average lifespan of an American industrial product was fifteen years. Today that lifespan is fifteen months.
- Finally, I wonder if any of you know the percentage of our workforce that is unionized? The answer is 17%. Now, what percentage is made up of people who run businesses or who are self-employed? The answer is 17% again—equal to the number who belong to labor unions. Think of that. That is a staggering change, totally at odds with the image most of us have of the American economy.

What all this boils down to is a radically changed economic landscape. We used to have a relatively stable economy; today we have an economy of constant change. We used to have an economy based on brawn; today we have an economy based on brains. We used to have an economy driven by giant corporations; today we have an economy driven by entrepreneurial firms of all sizes. Finally, we used to have an economy in which high volume and low cost were the keys to success. Think about manufacturing, or agriculture, or even services. Twenty years ago, you tried to get your costs down and your volume up. Today that doesn't work. Today the keys are quality and innovation.

Why? Because in today's global marketplace, the high-volume, low-cost manufacturing—and agriculture—is increasingly going to the third world where it can be done with low-cost, unskilled labor. American wages are eight times the world average. We simply can't compete on cost anymore. We have to compete on innovation, advanced technologies, and knowledge-intensive products and services. Our future, in short, depends upon our ability to innovate and our ability to use our minds, which means our most valuable resources are no longer things such as raw materials and cheap land and cheap labor. Our most valuable resources are people who can innovate and the information they need to do so.

This reality has changed the ground rules of economic development. It means we can't keep doing economic development the way we did it twenty-five years ago. Consider recruitment of industrial plants, which still passes for economic development in some states. As one small part of a comprehensive economic development strategy, recruitment still makes some sense—if a state doesn't give away the seed corn it needs to invest in its schools, universities, and the like. But if a state puts all its eggs in that recruitment basket, it's just not going to pay off the way it once did. Compared to Mexico, Brazil, and South Korea, every state in this country is a high-cost area. Along the Mexican border last year, the average manufacturing wage was eighty-eight cents an hour. That's your competition.

David Osborne is the author of Laboratories of Democracy, Essentials for Improving States' Economies.

Even when you do land a plant, it's not going to bring the number of jobs it once would have brought. Because wages in the U.S. are so high, companies are automating. Labor costs at Ford and Toyota are down to 18% of their total costs, and falling. Worse yet, the plants you do get are precisely the ones that are most likely to shrink, die, or move overseas. Actually, that's not even the worst of it. The worst of it is that even when branch plants bring jobs, they don't bring the process of innovation with them. They don't help create an entrepreneurial culture. In fact, they do the opposite: they reinforce the notion that people can just work for big manufacturing plants the rest of their lives. It creates a kind of dependent psychology, the opposite of an entrepreneurial psychology. Luckily, in the 1980s many states have embraced a strategy of building a homegrown economy by nurturing the elements that support innovation.

What are those elements? They are

- *EDUCATION—not just K-12, but lifelong learning systems
- *TRAINING—again, lifelong
- *BUSINESS CULTURE—more entrepreneurial
- *CAPITAL MARKETS—more aggressive, more entrepreneurial
- *SUPPORT NETWORKS—for traditional manufacturing firms that need to modernize
- *INFORMATION SYSTEMS—for all those involved in economic change: traditional manufacturing firms, banks, individuals who need education or training
- *UNIVERSITIES—David Birch calls technology-oriented universities today's equivalent of what the Mississippi River was to grain exporters in the 19th century—in other words, our lifeblood.

Notice that Birch refers to technology-oriented universities. We don't need more universities, we need different universities more oriented toward the real world, toward business, toward technology. We need to bridge the enormous gap we face between universities and business so we can get new ideas and research breakthroughs into the marketplace more rapidly. What I'm talking about here, essentially, are deep cultural changes, which we as a nation have to make if we are to remain competitive in a new economic environment—changes in our schools, our universities, our businesses, and our financial institutions. Economic development is really the process of using government to help bring about those changes in cultures, in institutions, in markets. Economic development is not about recruiting plants. It's not about doing deals. It's about changing cultures, changing institutions, and changing markets to make them work better in the radically new economic environment we find ourselves in today. And information is the most important tool we have with which to make those changes.

Now I want to tell you about two states that I believe have done the best job: Pennsylvania and Michigan. I'll start with Pennsylvania.

Pennsylvania won the biggest smokestack chasing prize of the 70s with a Volkswagen Rabbit plant. It was the first big foreign auto plant and the first big bidding war between states. Subsidies totalled approximately 100 million dollars. VW promised 5,000 jobs; government predicted 20,000 spinoffs. What Pennsylvania got: 2,500 jobs, about 2,000 spinoffs. And in 1988, after nine years of operation, VW closed the plant.

In 1978, Dick Thornburgh, a Republican, was elected governor. Thornburgh decided to study the economy, which was in trouble. He spent 2.5 years in a process that included thousands of people. The conclusions: the future lay with new businesses and advanced technologies, not with mature industries and existing businesses, and therefore, not with smokestack chasing. One facet zeroed-in on by the study: Pennsylvania's intellectual infrastructure. It had graduated more engineers than all but two other states and had four universities among the top 50 research institutions in the nation. Yet, there was little information exchange between business and academia. Pennsylvania lacked those networks so important to Boston and Silicon Valley.

Thornburgh decided to create a program to nurture that kind of interaction. He called it the Ben Franklin Partnership (BFP) because Ben Franklin was an entrepreneur, a scientist, and an innovator—and those were the people he was trying to bring together. BFP has four centers, in different regions, tied to universities. The centers have staffs and are run by boards consisting of members from business, government, and academia. The basic method: give matching grants to catalyze the private sector and try to stimulate the regional economy in many ways at once. Dollar figures total about $30 million a year among the four centers.

What is most impressive about the program is how it is put together: decentralized. The four centers have different focuses. This is very unusual, but very important. The different regions have different needs. But each center is comprehensive: not one program, but many. The bottom line is each acts as the center of an informal support network for innovation and entrepreneurship as you see in Boston or Silicon Valley.

You can use the same kind of structure to aim at less technology-intensive businesses. Pennsylvania does. It has a regional entrepreneurial development program that has seven local development districts. They focus on business development, provide financing, management assitance, procurement assistance, export assistance and a variety of other services. It's another support network for small and midsize businesses in more rural areas without major universities.

The point is that Pennsylvania has developed the best structure I've seen in the U.S. to deal with the needs of small and midsize businesses. It's decentralized, it's comprehensive, it networks a lot of resources and information together, and it's entrepreneurial rather than bureaucratic in style and structure.

Michigan was hit even harder than Pennsylvania by the death of the old industrial economy. It had 17% unemployment in the 1982 recession. But, Jim Blanchard, Democrat, was elected in 1982. Like Thornburgh, he understood the world had changed, that Michigan had to make the transition from a traditional, assembly-line manufacturing state to something else. Also like Thornburgh, he decided to study the economy, to figure out what that something else might be. Blanchard launched a concerted strategy to create a sufficient supply of what he calls *innovation capital*—and succeeded.

Michigan also needed to make it easier for its firms to modernize—to leave the old economy and join the new. The Michigan Modernization Service (MMS) evolved to help small and midsize manufacturers modernize, computerize. The service provides consultants: one team to help with modernization, another to help with training, and a third to help redesign labor management systems. These consultants are not bureaucrats; they are from the private sector on contract to the state. They provide information to businesses that need it—in a form in which it can be put to immediate use. And it works. When the Commerce Department surveyed almost one hundred clients, 75% said they felt they were dealing with business people, not bureaucrats. On a scale of one to ten, with one being very dissatisfied and ten very satisfied, they rated MMS 8.19.

Now I want to wrap up by returning specifically to the role of information in economic development. Obviously, information is the lifeblood of the new economy. The central task we face—or rather, you face, as information specialists—is organizing information to be maximally useful. You and your colleagues have already done some of that. In Colorado, for instance, the Colorado Alliance of Research Libraries has created a sophisticated computerized information system and database used by 30,000 people a day. A regional economic development group called the Metro Denver Network uses that system in its work. Other states have linked all their colleges to the same database and provide courses to small regional colleges and community colleges from the big ones via telecommunications. But there's so much more we could do.

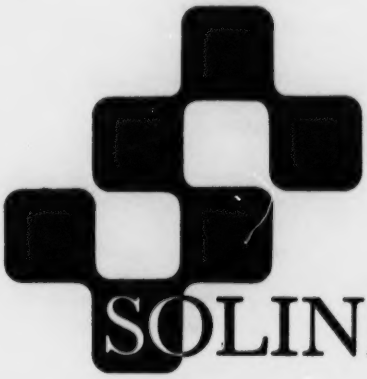
Look at the question of job training, for instance. We need information systems that tell consumers just how effective each program is—the placement rate of each institution or program, the wages graduates have earned, etc. Arizona decided to provide that information for all community colleges and other post-secondary educational or training institutions. The state hired Northern Arizona University for the project. It was up and running for a year, and then Evan Meachem cut the funding. If we're going to have a lifelong learning system, we need this kind of information for all educational training institutions. Now that's something for collaboration between economic development organizations and libraries.

Or look at the question of innovation in manufacturing. In Germany, there is a technology transfer center that maintains a data file of all the technology resources available to small and medium-sized businesses. Denmark funds local technology information offices throughout its country. The offices are in the process of computerizing their information bases. And in Italy, the National Confederation of Artisans (CNA)—equivalent of a national small business association—operates a computerized database of the capacities and production potential of each of its member manufacturers for use by firms in search of subcontractors. Large and small firms can log-on at any time and locate a local firm that can produce the part they need.

In Capri, Italy, the CNA and the regional government created a service center for the textile firms back in 1979. Problems they faced: increased competition from Southeast Asia, segmentation of demand, and arrival of computer-driven technologies. None of Capri's two thousand small knitwear and clothing firms could afford on their own to monitor world fashion markets, bring in technical support, or respond quickly to changing consumer tastes. They needed better information. So they formed a service center. The center has approximately six hundred members who receive publications about upcoming fashion trends and who can use its seminars, consulting services, library—and a database on fashion trends and a video magazine of fashion trends. But the most impressive function is a new computerized design program that has a file of designs from all parts of the world, e.g., every collar back to the Renaissance. The local business can use the computer to modify any design, try out up to 30,000 colors, and come up with any new pattern. They can use the system to send images to their buyers, to market, etc. Now that's an information system!

As you can see from these examples, we have only scratched the surface of the information services we could provide to help with economic development. So much of economic development involves consumers of services having the right information, and so much involves networks of firms. In both cases, information systems are crucial.

Let me conclude with a warning, however. There is a tendency in government and in academia to develop services, such as information databases, based on the capacities of the providing institution—university or government. But what we have to do is fill the information user's need—in a form and place that makes it accessible and useful. We have to make sure the user is in the driver's seat, not the provider (the university, library or government programs) but the user. Your challenge, then, is to develop user-driven, user-friendly, information systems. That means you've got to go out and find the potential users, and let them define what they need and in what form it should come. It ought to keep you busy in the 1990s!



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The Future Of Economic Development In The Region

Jesse L. White, Jr.

The Southern Growth Policies Board is funded and governed by the thirteen state and territorial governments, with the governor, a state senator and representative, and two citizen members serving on the Board from each member state. This combination of gubernatorial, legislative, and private sector membership gives us a unique strength, and one critical in today's economy. In addition, we have an Associate Membership program which includes over 250 corporations, universities, colleges, and non-profit agencies.

Our motto is "creating strategies for economic development." We create these strategies through our research, publications, and meetings. The Board has regular, serial publications dedicated to emerging economic issues, human resource development, international trade, growth and environmental management, intergovernmental relations, and technology. We also publish special studies and proceedings. Our publications are distributed to about 1500 public and private sector leaders at the highest levels, as well as the media, throughout the South.

Why choose the words "economic development" and not "economic growth" in our motto? The difference in the two is between spurring economic activity, on the one hand — which is growth — and developing the *Long Term Capacity* to generate self-sustaining economic activity, on the other — which is development. Examples might help clarify the distinction:

- An increase in the number of jobs is growth; raising the education and skill levels of the work force is development.
- Having one or several companies successfully enter export markets is growth; having all your students graduate with meaningful exposure to foreign language, world history, and international economics is development.
- Recruiting an engineering firm is growth; increasing the capacity of the local college's engineering school and industrial outreach to local business is development.

Economic growth measures increases in short term indicators; economic development measures the creation of long-term capacity. And, both are critical in the policy arena because people need jobs in the short run while capacity is being built in the long run. But, one cannot be ignored at the expense of the other; too often in the South, we have ignored the hard, long-term challenges of development and concentrated instead on simple job growth. Our goal at the Board, then, is to keep the eyes of our leaders focused, at least in part, on "creating strategies for economic development."

In order to create strategies, we must, of course, have a view of the future. I would like to discuss six major trends which will profoundly offset that future, how well our past and present policies have equipped us to deal with that future, and, finally, a new plan for carrying the region into the 21st century.

The first major trend will be the nature of change itself. Change has always characterized economies. However, what is different *now* is the pervasiveness and velocity of these changes. At the bottom of the business spectrum, we have seen during the past six years unprecedented levels of small business creation and failure, a boiling caldron of entrepreneurship. At the top end — in the Fortune 500 — we see much of the energies of America's so-called "great companies" being spent on mergers, acquisitions, hostile takeovers, restructuring, and refinancing — a gargantuan and costly reshuffling of assets with few jobs being created and little productive capacity increased.

For the businessman and worker, all of this means increasing uncertainty in an ever-changing and churning economy. Estimates are that the average worker entering the labor force during the remainder of this century will change occupations at least three times and jobs seven times during his or her working life. The entrepreneurial churning at the bottom, the internationalization of markets, and the seemingly whimsical effects on thousands of executives and workers of corporate restructuring — all of these factors will probably continue until 2000.

A second trend is the growing importance of the human resource base in the future economy. An educated, skilled, flexible work force will be the key to an economy functioning well in this volatile and uncertain environment. We already know the essential facts about the work force in the year 2000. About 75% of that work force is already working and all have been born. Of that current labor force, 45% are female, 15% are minority, and 25% are classified as adult functional illiterates.

Regarding new entrants into the labor market, we all hope that the impact of current education reform will staunch the flow of newly minted illiterates into the work force. With the slowing of population growth, however, we will not have an abundant supply from which to choose, as labor markets are projected to be very tight between now and the year 2000. According to a recent study by the Hudson Institute called "Workforce

Dr. Jesse L. White, Jr., former Executive Director, Southern Growth Policies Board

2000," the profile of new entrants into the labor force is startling. Only 15% will be native white men; two-thirds will be women, and nearly 21% minority or immigrant women; and over 42% will be minority or immigrant. This, then, is the labor force upon which our competitiveness will rest.

A third trend is the continuing globalization of the economy. This development has proceeded at almost exponential speed in the last twenty years and is almost certainly irreversible. For example, for forty years from 1929 to 1969, America's dependence on international trade remained small and constant at about 4% of GNP. Between 1969 and the present, however, it has soared to over 20% of GNP; and, now, about 70% of our goods compete here and abroad with foreign made goods.

More and more Americans work for foreign-owned firms, a do nearly a million Southerners; and more and more jobs depend on exports — in the South alone, over one and a quarter million jobs. Firms continue to internationalize — in terms of markets, ownership structure, and production: Barring calamity, we will most certainly function in a *profoundly* globalized economy by the year 2000.

The fourth trend will be toward a more sophisticated understanding of what has been called the post-industrial economy. The percentage of the work force employed in manufacturing will continue its twenty year decline, and most of the job creation will be in the services sector broadly defined. Yet this relative decline in manufacturing employment does not mean a decline in the importance of manufacturing itself. The action in manufacturing between now and 2000 will *not* be in the mass employment arena, as it has been in the past. Instead, it will be in the area of technology — developing and applying sophisticated, computer-driven, integrated, quality-controlled, and flexible automated manufacturing systems . . . and, equally important, in the employment of a highly-skilled work force. Again, according to the Hudson Institute, *today* 40% of the jobs fall into the lowest skills category; by 2000, that figure will be 27%. By contrast, only 24% of current jobs fall into the highest skill category, while that figure will be 41% in 2000.

Closely related to this trend is a fifth one, and that is information. Access to information and the infrastructures to transmit it will be the keys to success. The development and availability of databases and the telecommunications system to move them will be critical public policy issues for the next twenty years.

Another aspect of this information age is the growing interconnection between education and economic development. This has profound implications for our education and training systems. And, it extends to higher education where we see that the availability of brain power is important to local growth and development, particularly access to technology.

A sixth trend is that altered development patterns emerging out of a new business climate will have locational impact. In the next twenty years, this spatial impact will likely be the continued metropolitanization of the Southern economy at the expense of many rural and small town areas. Traditional manufacturing jobs are being lost in rural and small town areas, while the new information and services economy jobs are being created in the metro areas, leading to our worry now that two Souths are being created — one metropolitan, middle class, growing; and one rural, isolated heavily minority, and declining. Since most of the elements of this new business climate — major airports, universities, urban amenities, telecommunications, and good schools — are found in our metro areas, this pattern will probably continue.

How well positioned is the South to deal with these trends? Keeping in mind what William Faulkner said about the South . . . "The past is never dead; it's not even past" . . . how well has our past prepared us for the future? In some ways very well. In other ways, very poorly.

In 1930, the Southern economy was profoundly different from that of the rest of America. We were impoverished, with a per capita income 50% that of the nation; we had an industrial structure very different from the U.S. as a whole, with far greater percentages of the work force in agriculture and fewer in manufacturing and services; we had a society undergirded by a rigid racial caste system and highly averse to change; we shared with our fellow Americans a provincial and domestic view of the region's economy; and we embraced a conservative philosophy which discouraged state investments in education and social programs.

Several developments over the next forty years turned the region around. *First*, the region developed a type of "industrial policy." In 1936, Mississippi developed the BAWI plan, which was to recruit branch plants of labor-intensive, low wage manufacturing companies domiciled outside the region to come to our state to provide badly needed jobs. We lured these plants with the promise of cheap and unorganized labor, abundant natural resources, low taxes, and public subsidies in the form of IDB's and tax abatements. The plan spread quickly throughout the South until it became the industrial policy of the region.

Second, millions of displaced agricultural workers simply left the region, headed mostly to the cities of the North in one of the great migrations of American history. *Third*, a new era of federal policy, brought in by the New Deal, taxed and redistributed national wealth, often on the basis of need, which greatly benefitted the impoverished South. And, finally, the racial caste system was dismantled in the 1960s and 70s with the ending of all de jure and most de facto segregation, thereby breaking down long-standing barriers in labor markets.

These developments industrialized the rural and

small town South, exported much of our poverty to the North, halted and even reversed the outmigration pattern, and dramatically increased per capita income to 85% of U.S. per capita income in 1975, a far cry from the 1930 level of 50%. And, suddenly, the notion of the "Sunbelt" was born. We had come all the way from being, in FDR's words, the nation's number one economic problem of the 1930s to the promised land of the 1980s.

However, there were some severe problems imbedded in these policies and developments. The industrial policy of branch plant recruitment — brilliant for the 1930s — turned into an albatross in the seventies and eighties. The policy, in essence, was selling the South's low skill, low wage, unorganized work force. However, the low wages produced only poverty; the low skills and education produced a labor force in which 25% are functionally illiterate; and, the low taxes denied the public funds for badly needed investments in education and infrastructure.

The industrial policy of branch recruitment also obviated the need for venture capital, industrial outreach, technology transfer, or the teaching of entrepreneurial skills — those key ingredients of indigenous business creation and success. If you are importing the jobs rather than creating them, none of this is really essential.

Regarding other policies of the past, the financial responsiblity of state governments was and is a plus to business, but it often reflected a *too* conservative approach to investing in education, social, and economic programs . . . creating a profound deficit in our human capital base, which is now ***the most important part*** of the competitiveness equation.

And finally, because of our definition of economic development and the structure of our industrial economy, the nature of leadership was hierarchical. A planter-manufacturer-banker-lawyer elite at the top, with a vast labor pool at the bottom, meant that the requirements of leadership were narrow, so that many of our communities now suffer from leadership vacuums. It is becoming increasingly clear in the churning economy of the twenty-first century, creative leadership across all sectors of society — and not just the elite —will be the key ingredient to making everything else happen in states and localities.

We at the Southern Growth Policies Board have been addressing many of these issues for the past seven years through our publications, conferences, and networks. All of this work came together in a new, intergrated, and exciting way in the 1986 Commission on the Future of the South. The Commission's final report, ***Halfway Home and a Long Way to Go***, has been acclaimed one of the most compelling and moving public policy documents in Southern history.

Halfway Home lists ten regional objectives for the South to work on. These objectives provide us with a road map for addressing the future. It posits nothing less than a ***a new model of economic development for the South***. It is a model of internal development, and one that calls for a new set of strategies aimed at education and training, capacity building, indigenous business creation, and a far more sophisticated role for government.

And, it is here, I would argue, that we find the good news from our region . . . and that is in our capacity to come together as Southerners to care about each other, and to work on our problems collectively. This is a great regional strength that is found nowhere else in America. This sense of regional identity is a tremendous asset if we harness it positively and with vision. And, this is what the Southern Growth Policies Board and the Commission on the Future of the South is all about . . . an effort to create a regional agenda for action. You will see an action agenda that will address the consequences of our past and the future I have described above in the following objectives: (1.) Provide a nationally competitive education for all Southern children. (2.) Mobilize resources to eliminate adult functional illiteracy. (3.) Prepare a flexible, globally competitive work force. (4.) Strengthen society as a whole by strengthening at-risk families. (5.) Increase the economic development role of higher education. (6.) Increase the South's capacity to generate and use technology. (7.) Implement new economic development strategies aimed at home-grown industry. (8.) Enhance the South's natural and cultural resources. (9.) Develop pragmatic leaders with a global vision. (10.) Improve the structure and performance of state and local government. I urge each of you to read the report. It is only 23 pages long and can be read in less than half an hour. Since we hired a novelist to write ***Halfway Home***, you will also find that is unlike any public policy document you have ever read. It is beautifully written in a Southern style.

We have come so far as a region and, yet, as the report states, we have a long way to go. I earnestly feel that these ten regional objectives give us the road map to find our way home. But, we must look to the future; we must minimize our petty differences; we must forget business as usual; we must insist on excellence in all of our institutions, and not just the sports teams; we must move beyond the good old boy network to include in the profoundest possible way the good old girls and the good old minorities in this highly independent world in which the good life of one of us is tied inextricably to the good life of everyone else.

As the report ***Halfway Home and a Long Way to Go*** closes, so I close with its words to you: "By taking action on these regional objectives, we can honor the past while moving into the future and building for ourselves and our children a resilient, competitive, and human society which will, by 1992, bring us a lot closer to home."

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The Economy of the Rural Southeast

Rick Carlisle

Let's try to understand how the Southern rural economy is faring within the overall Southern economy. The plight of rural areas in the South—and indeed across the country—has penetrated the popular press as well as academic and policy journals over the last few years. Much of that has been due to the work of the Southern Growth Policies Board under Jesse White's direction. *Halfway Home and a Long Way To Go* made the case that the rural renaissance of the 1970s was shortlived. The 1980s brought a very different picture. We were in danger of developing two separate and unequal economies—one urban and prosperous, one rural and in relative decline.

The very fact that the organizers of this conference felt the need to have two separate presentations today—one urban and one rural—illustrates the division that has taken place. The Southern Growth Policies Board, MDC, Inc., and other Southern policy organizations have done their job well. Few would argue today that the rural South lags the region as a whole in a host of socioeconomic indicators—poverty, infant mortality rates, inadequate housing, educational attainment, and most certainly quality jobs. (Yet I must say that periodically I still hear arguments that rural development has continued unabated—an argument that flies in the face of almost every statistic I know.) Nevertheless, I think the case is well enough made that it would serve little purpose to make it again here today. Instead, I want to try to give some perspective on the causes of that decline. In particular, it's important to know if it's a cyclical decline, and largely self-correcting, or if the stress faced by rural economies today is indicative of longer-term changes. If so, we need to understand those changes in order to come up with reasonable policy options. I believe we do understand quite a bit. Let me very quickly review how rural areas have fared over the last few decades.

THE PAST DECADES

The 1970s were generally reviewed as the period of the rural renaissance. Over most of this period (and through much of the sixties in the Southeast) rural areas in general grew more rapidly than cities. In the sixties and seventies, manufacturing employment grew by more than one million—about an 80% increase. This growth in manufacturing obscured the continuing decline in agricultural employment, which had generated relative decline in the 1940s and 1950s. Fueled largely by branch plant locations, particularly in textiles, apparel, wood products, and electrical fabrication, new manufacturing jobs not only absorbed the losses in agriculture but generated net new employment growth. High energy prices, caused in part by OPEC, and strong housing demand also generated growth in resource-based economies. The outmigration prevalent in the 1950s and much of the 1960s was reversed as some of the fastest growing counties were in rural areas. (Southern cities, unlike their Northern counterparts, still did well in this period and continued to outpace rural communities. Nevertheless, the disparity in growth rates narrowed.)

The disparity in per capita income between urban and rural areas also began to narrow. Large-scale federal development programs, huge by today's standards, made significant investments in rural infrastructure. The rural renaissance even made the cover of *Newsweek*. Pockets of high unemployment and slow growth remained, to be sure, but all appeared to be rosy. By the mid-1970s, many state policy makers were focusing on how rural communities could provide the necessary services to accommodate growth while preserving the rural character.

About 1980, disturbing signs began to appear that these trends were rather shortlived. By the mid-1980s, it was clear that the common wisdom of the 1970s had to be assigned to the same dustbin where much common wisdom ends up. The rural renaissance had not only halted, but many rural economies were once again in decline. Just as rapid growth in manufacturing employment had fueled the growth of the 1970s, a loss of manufacturing jobs crippled many rural economies in the 1980s. Coupled with a decline in the growth of energy demand, falling energy prices, and by the end of the decade, a slow-down in housing, resource-based economies suffered as well. What happened?

The immediate cause was the recession of the early 1980s. Heavily dependent upon manufacturing, and particularly non-durable manufacturing, rural areas lost jobs rapidly in the downturn. But the stresses did not end with the resumption of economic growth. Rural areas did regain most of the job losses in manufacturing, but there was little net new growth. Throughout the decade, rural areas grew at about half the rate of metropolitan economies. Rural economies lagged urban economies in almost all sectors. The most telling indicator, however, was the change in the growth rates of manufacturing employment.

Throughout the 1980s, there was a general slow-down in the rate of manufacturing growth, and the growth that did occur was predominantly in metro counties, non-metro counties adjacent to metro counties, or along interstate corridors connecting metro centers. A study by John Kasarda at the Kenan Center for

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Competitiveness and Employment Growth is instructive. Kasarda examined employment growth in North Carolina counties from 1983-1987. During that period, the economy generated over 700,000 total jobs, but lost 365,000, creating a net gain of 398,000 new jobs. Fully 58% of those jobs were created in the thirteen counties along Interstate 85 from Charlotte to Raleigh. The services and retail trade sectors were responsible for over half of all the new jobs.

Also instructive is the type of firm that was the most likely to generate new jobs. Of the 763,000 total new jobs created, over 400,000 came from start-ups. Another 233,000 came from expansions of existing business. Only about 120,000 came from relocations or openings of branch plants in the state. Small business with under twenty employees provided over 20% of net new jobs. The firm most likely to grow rapidly was small, with under twenty employees; independently owned; twelve years old, and in the manufacturing sector.

As demonstrated in studies such as *After the Factories,* this portrait holds throughout most of the rural South. Employment growth is concentrated in the services and trade sectors. Small firms contribute most employment growth, and most growth is in or near urban areas or along highway corridors. Most telling for the rural South, growth in manufacturing has shifted to metro or near-metro areas.

Taken together, the indicators suggest a restructuring of the Southern economy fueled by the restructuring of the manufacturing sector. That restructuring does not bode well for rural areas; the consequences may be as far-reaching as the restructuring in agriculture that took place over the last several decades. The primary reason is the engine that's driving the restructuring—the response of the manufacturing sector to the internationalization of the economy.

INTERNATIONALIZATION OF THE ECONOMY

That phrase has been repeated so often that it has become a platitude, but its impact is still not fully understood. The result of the growth of a global economy does not simply mean that domestic producers must compete with low-cost, offshore producers—as happened in the apparel industry. Nor does it simply mean that domestic producers must gear up to compete with the electronic and automotive wizardry of Japan, Inc. The most far-reaching effect has been fundamental changes in how manufacturers arrange production processes, in the relationships with suppliers, and in how products are put together. It has meant the introduction of new technologies substituting capital for labor and requiring a different kind of labor. It means greater dependence on technicians, engineers, and less on willing sets of hands.

The rural renaissance of the 1970s was largely created by the location of relatively labor-intensive, low-technology branch plants that produced long runs of standardized products. The successful firm of the 1990s will use technology to produce shorter runs of specialized products, with zero defects, geared to the needs of the user—whether that is the consumer or the next firm in the production process. Rather than looking to the lowest-cost bidder for a standard part, firms are beginning to certify a smaller number of suppliers that can provide goods on a just-in-time, zero defect basis. Also in demand are firms that can respond quickly to changing markets, firms willing and able to redesign component parts as the end product is modified. The industrial base built in rural economies over the last decades is not well positioned to respond.

Several months ago I spoke at a bankers' conference in another Southern state. At that conference, a representative of a Japanese company that had recently located a major production facility in that state talked about the location decision. The company had wanted to locate in a rural area—by that, they meant the fringe of the largest metropolitan area in the state, on a four-lane highway, with access to an airport with regular commercial service. The facility will employ about 150 people when fully operational. The highly automated production line is three football fields long and has eight workers on the production line. While this example may be extreme, it's symptomatic of the changes occurring. Ten or fifteen years ago, that plant might have located in an outlying county, using lower-end technology, and employing one hundred workers on the production line. But it's also likely that the plant would not survive. To compete, the company made a series of decisions that made a metropolitan location imperative.

Two more quick examples can perhaps further illustrate these changes. I recently spoke with an industrial designer who is involved in technology transfer in the apparel industry. Marketers in the United States can view, by satellite, fashion shows in Hong Kong and Taiwan. If they see fashions they think will move in the United States, an order for a limited run can be placed by wire. That order will arrive in the stores in the United States five hundred hours later. If the product sells, additional orders can be placed for limited runs matched to the market. Technology is being used to create a highly responsive, market-driven production/distribution process that operates on a global basis.

My organization recently carried out a study of buyer/supplier relationships among a group of large companies in eastern North Carolina. We found that more companies were moving to a certification process. This movement was resisted by many of the smaller companies. We also found that the manufacturing firms purchased approximately 15% of their inputs from foreign suppliers—about the same amount as purchased from North Carolina suppliers. Internationalization of the economy has arrived, but its effects have still to be fully realized, fully felt, and fully incorporated in policy. It's not just a matter of exporting more—it's understanding and reacting to major changes in the economic base. And that has major implications for both urban

and rural economies, which brings me to the last point I want to make before moving on to some possible solutions.

Dylan Thomas, that great but often obtuse Welsh poet, wrote a line in one poem that went something like, "The force that through the green fuse drives the flower drives my green age." He is saying that the same energy that causes plants to grow is the energy that feeds him. Similarly, the same economic changes that are generating growth in our Southern cities are creating stresses in rural counties that are not major tourist destinations, have no major public employers, and are not linked to urban centers. The answer is not, then, to underinvest in cities or to resist the changes that are occurring; that will only generate less growth for the region as a whole, with no long-term benefit to rural economies. Instead, we have to adopt strategies that overcome rural disadvantages, where possible, and link rural economies more closely with their urban neighbors. We in the South are fortunate in that regard; unlike rural areas in the central states, rural in the South is more likely to mean a network of smaller communities, relatively densely populated compared to non-South rural areas.

We have to keep investing in our cities, for they will be the generators of significant employment in the manufacturing and services sectors over the next decade. But we also have to begin to knit together urban and rural economic policies to create greater opportunity in the rural South. There's a lot we don't know about how to do the task. Information is a key—more information about how the economy is functioning at a micro level, about linkages among firms, about what causes a small firm to suddenly take off and grow, about improving connectedness between companies in different geographic locations.

In North Carolina, we are sponsoring a demonstration of one way to build connectedness among firms—industrial networks. Networks are essentially cooperative associations of small companies formed to solve a common problem or to take advantage of an opportunity that one firm alone could not exploit. This practice developed in the Emilia-Romagna region of Italy where tens of thousands of small companies have become major producers and exporters. There, however, numerous small companies are in close proximity to each other. In rural North Carolina, where we are operating, firms are more dispersed. Can information technology be used to span geographic distances and make this kind of cooperative action possible?

We also need to do a much better job of information transfer to small and medium-sized companies. That's information about technology, information about markets, and information about available services. Most states invest in an array of small business services, often through small business development centers attached to universities or through the community college system. Other states invest in capital or financing programs. A lot of small companies aren't aware that these services exist; they don't know how to access them and may not know how to deploy the information provided by these services.

We also need to figure out ways to deliver services to groups of firms or to address problems common to an entire industrial sector. One-on-one technical assistance is time consuming. Also, as the Kasarda study demonstrated, the small business sector is extremely volatile. Net job growth obscures enormous change in the economy. How can a service provider judge whether the hours invested in a firm will be for a winner or a loser in the competitive struggle? By wholesaling services, or working on problems common to a number of firms, the chances of that assistance paying off are magnified.

We need to figure out how do deliver workplace literacy programs to small and medium-sized enterprises. A study of automation in the Southern rural workplace by the Southern Growth Policies Board found that companies investing in new technologies had to invest in remedial education before workers had adequate skills to train on the new equipment. These were large branch plants with relatively significant resources. It's unlikely small companies could invest the time or resources in providing remedial education. That means the technology would be underused or never used at all. Rural firms can't import new, better educated workers. Some form of workplace literacy effort geared to the needs of small and medium-sized enterprises is critical.

We need to deliver information on production techniques and provide more production-related assistance. Much of the technical assistance infrastructure developed over the last decade is in managerial and financial counseling. That's certainly important, but the same level of production services is not available in most states.

Well, I think that's enough to say to support innovative ways of information transfer as key. It must be the right information—and it must be in a usable form. I would urge we constantly evaluate all our technical assistance and information delivery resources to determine if they are providing usable services that result in productivity gains to the end user.

CONCLUSION

Since I've been speaking globally, let me close with a few final global prescriptions.

- We need a better understanding of the impact of the growth of large regional banks in the South. The growth of sophisticated, competitive banks has certainly produced a wider array of commercial services. But as competition has grown in urban markets, the effect on the availability of financing in rural markets is unclear. We need to maintain an array of financing tools for small and medium-sized firms, from small loans, to debt, to financing new technology, to equity investments.
- We need to be open to regional cooperation in both substate regions and across regional boundaries.

Political jurisdictions often have little in common with the geography of economic interrelationships or with the most efficient provision of services. Regional authorities may be effective deliverers of services in many situations.

- We need to carefully think through our infrastructure investment policies to insure they work to efficiently link together urban and rural communities. We need to integrate decisions about highways, ports, airports, and water and wastewater systems.
- We particularly need to think through policies regarding telecommunications. This may be one of the effective means for linking urban and rural economies. But we need better understanding of how telecommunications can be used effectively by small and medium-sized enterprises. And we need to articulate how public policy should guide these private investment decisions.

All these decisions will be made one way or another. But how they are made will say a great deal about the quality of development in the rural South. It's like the story of the two friends who went into business together, one a veterinarian and one a taxidermist. Their motto was, "Either way you get your dog back." Well, either way we'll get our policies back. Let's make sure they're living and breathing policies.

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The Economy of the Urban South

Roy Bahl and David Sjoquist

We want to tell a story about where the urban South is in 1990 and what we face in this decade of the 1990s, based on research we have undertaken concerning the economy of the region. This is an important story. There have been important changes in the 1980s and we can foresee other changes coming in the 1990s. These changes present the South with major challenges. Federal policy regarding the tax structure and aid to state and local governments are changing the way business is conducted in both the private and public sectors. What effect will this have on the South? In 1992, the integration of the European Economic Community will create new opportunities and new challenges. How will this affect the South and how should the South respond? The new techonology demands that the South catch up in terms of education. How will the South do that? All of this carries an important role for the collecting, organizing, and dissemination of information.

There are three parts to the story. First, there is the economic performance of the South vis-a-vis the non-South. What has been the performance of the South? Second, the fiscal patterns. How do the tax structure and expenditure patterns compare? Third, what are the policy implications? Where do the data lead us, and what other stories are there to teil?

Economic Performance. The South has enjoyed rapid growth as people and jobs have moved from the North and Midwest to the South. But is the glitter of that growth gone? Relative to the urban non-South, the urban South has been growing faster, but the difference in growth rates has narrowed as the growth has slowed in the South and picked up in the non-South. For example, during the 1970s the population of the urban South grew at an average rate of 2.32 percent, while the urban non-South grew at 1.02 percent. But for 1986-1987, the growth rates were 1.33 percent and 1.14 percent, respectively. Population growth in the urban South has slowed substantially.

This decline in the growth rate is even more pronounced for employment. During the 1970s, the average annual growth rate of employment was 3.58 percent in the urban South and 2.31 percent in the urban non-South. But the growth rate in the South fell to 2.48 percent while rising to 2.95 percent in the non-South.

One might want to say that this change is the result of the energy collapse in the Southwest. In fact, there has been a modest increase in the growth rate in the Southwest. The change is the result of a very sizable decline in the growth rate in the Southeast.

Within the South, growth rates are much higher for larger metropolitan areas. Thus, although metropolitan areas in the South are generally smaller in the South, there is a growing importance of the larger metropolitan areas.

Per capita income in the South has lagged behind the rest of the country. Beginning in the late 1940s the incomes of the South and non-South began to converge. Recently, however, that trend has been reversed. For example, by 1980 personal income per capita in the urban South had reached 90.2 percent of the income in the urban non-South. By 1987, this had fallen to 87.5 percent.

The reason for this reversal in growth rates and in the relative level of per capita income is not clear; we can only speculate. The basic reasons why the South grew have not changed. The cost of doing business in the South is still lower than in the North; wages, energy costs, and taxes are still lower in the South. Population, and hence demand, is still growing faster in the South, so why has employment slowed down? Perhaps part of the answer is that the uniqueness of the South relative to the North disappeared. In the 1960s and 1970s, the North lost its unique competitive advantage. Changes in transportation and production technology meant businesses no longer needed to be near markets. Thus, manufacturing, attracted by lower costs, moved South and with it came support services. As retirees and vacationers came South, other industries developed. The urban South became a center of support services, such as accounting, banking, and legal, for these industries.

The 1980s saw the growth in international banking, increased spending on military technology, and further change from a production to a service economy. The result was that the North regained some of its competitive advantage because of the increased importance of education and a skilled labor force. And the South lost manufacturing to developing countries with even lower costs.

Another factor for the relative slowing may be a change in tastes. Perhaps the lure of the South has faded some as the greater level of public amenities such as parks, symphonies, museums, and the revival of the Northern cities have increased in importance. But the weather and congestion in the North is still there! It is too early to tell whether we have entered a new era, but we should be concerned and need to determine the

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cause of the change in direction.

Fiscal Patterns. Let us turn now to a look at the fiscal patterns of the South. In general, the South is positioned differently. State and local government tax effort, that is, the percent of income that goes to taxes, is lower in the South. In addition, the composition of taxes is different. In the South there is greater reliance on sales taxes and on user fees, while other parts of the country rely more heavily on property taxes and income taxes. Similarly, government spending is lower in the South. Per capita expenditures are 15 percent lower in the South than in the nation, and educational expenditures are 20 percent lower.

Although federal assistance is lower in the South, it accounts for a larger share of state and local budgets than in the rest of the country. In addition, the state governments are relatively more important in the South. For example, 66.5 percent of state and local government revenue is collected by state governments in the South and only 60.9 percent in the U.S. A similar, but less pronounced pattern is found in expenditures. What this pattern suggests is that the government leadership needed to address the issues facing the South will generally be found at the state level.

The story is thus one of an underdeveloped public sector, especially at the local level, with no help on the way. Of course, expenditures need to stay in line with revenues, and the South should not risk losing a competitive advantage by raising tax rates too much. However, the other side of that equation is the need for adequate services such as the provision of quality education and infrastructure. Given the recent change in the structure of the U.S. economy and the changes that are likely to occur, the current low level of service may restrict the growth of the more desirable industries more than low tax rates attract such industries. By raising the tax rates to the national average, the South could provide substantially improved and needed public services.

Issues for the 1990s. There are several issues that the South needs to address as we move into the 1990s. The first issue focuses on the changing economic structure. The economy is moving from an industrial to a service economy which will increase the importance of the urban South. In the past the South has focused on manufacturing, attracted by low wages and taxes, as its engines of growth. How will the South fare in a more service-dominated economy? As the mix of jobs in the central cities changes from blue collar to white collar, how will the urban areas respond to the needs of the low-skilled central city resident? Will the states take action to address the issue of urban poverty that results from this mismatch?

A second issue is the move towards a much more international economy and the opening up of Eastern Europe. The South has been a major beneficiary of foreign investment, but with an expanded market in Western Europe coming in 1992 and a heavy demand for investment from a more open Eastern Europe, where will the South turn?

Another issue is the changing demographics. The growth of the elderly population and female-headed households will place a different set of demands on the economy and the public sector. Services such as health care and child care will become increasingly important.

The fourth issue concerns the tax structure. The old tax structure was designed with a non-urban, agricultural and manufacturing environment in mind and with a different set of federal tax and expenditures patterns. The South has changed to a more urban service economy, and federal tax and expenditure policy was altered significantly during the 1980s. The result is a need to modernize the tax structures in order to match the new economy reality and to match voter preferences. This means more user charges, benefit taxes, and the taxation of some services under the general sales tax. It also means rethinking the relationship between industrial policy and the tax structure.

The fifth major issue is the explosion of information and information technology. To compete on the economic front and to design appropriate policies, it will be increasingly important that information is organized and disseminated efficiently. Librarians hardly need to be told this.

In summary, the urban South has been on an exciting ride for the past several decades. But changing conditions suggest that the South cannot rely on the tried and true. The changing face of the U.S. and world economies means that the urban South will need to find new policies and new directions if it is to continue its economic development. The 1990s will be exciting times for the South, but they will also be challenging ones.

Visualization and Information: Computer Images

Earl R. Mac Cormac

INTRODUCTION

Moving into the 21st century will carry us fully into the Age of Information. The advent of the digital computer in the middle of the 20th century marks one of the watershed events in human history. Other turning points in the use of information have been the beginning of painting as evidenced in the caves of Altamura, Spain, the development of writing, the invention of printing, and the discovery of photography. The computer allows for the massive storage and retrieval of information, the processing of information, and the expression of information, especially mathematics, in images.

Data stored in computers can be represented in novel images that change the ways in which researchers conceive of problems. This creative processing of information has led to the development of a new field of study: "scientific visualization." When the computer presents a visualization of a problem, it parallels the human mind that generates a mental image of a problem derived either from the mathematics involved or the words describing it. Formerly, an individual investigator might produce one or two mental images of a problem. Now, a computer can produce literally thousands, forcing the single researcher to confront more possible solutions than he or she could have conceived of alone.

Libraries have been viewed as repositories in which researchers from various fields can search books, microfilm, microfiche, and even computers for information pertinent to their problems. Although the categories for storage and retrieval have affected the nature of the problem, most of the processing of information has been left to the researcher. In order to provide relevant information necessary to compete economically in the 21st century, I believe that libraries will be called upon to store, retrieve and process images. Libraries will become networks devoted not only to the retrieval of literary information but also to the retrieval and processing of visual information. In the remainder of this paper, I will discuss the issues arising from the challenge to libraries to become networks that connect and process images: (1) the storage of images; (2) image processing; (3) heuristics, and (4) ethics.

The following image portrays non-linear dynamical algorithms that represent chemical reactions and is reproduced with permission from the Max Planck Institut fur Ernahrungsphysiologie in Dortmund, West Germany. In looking at this computer-generated image, one literally sees mathematics. The picture expresses visual mathematics; before the advent of the modern computer such visualization was possible only in the mind of the gifted mathematician. Not only does the image present chemical information mathematically expressed, but it also reveals fascinating beauty.

Image of Non-Linear Dynamical Algorithms from Chemistry and Mathematics

(Reproduced with permission from the Max Planck Institut fur Ernahrungsphysiologie, Dortmund, West Germany)

IMAGE STORAGE

A library that wishes to store images faces problems similar to that of cognitive psychologists who sought to explain how the human brain stores perceived images (Kosslyn 1980,1983). For some time, psychologists hotly debated whether such things as mental images existed. Those in favor of the existence of mental images invoked the introspective evidence of an individual's ability to picture past events from memory. Opponents replied that not only is introspective evidence notoriously unreliable, but the brain, with only 10^{12} units of storage, has hardly sufficient capacity to hold the ordinary visually perceived events experienced every day. A popular solution to this problem strongly asserts the existence of mental images and postulates the operation of the brain as a type of cathode ray display in which the pieces of images are combined as the dots of a television screen are seen by the eye to be a picture. In other words, the brain stores similar bits of information derived from many images and then, through processing, combines them into a multitude of different images and thus overcomes the storage limitations of memory. From similar building blocks, through a recursive process, one can amass an infinite number of images. But how can one be sure that the images processed by the brain accurately replicate those previously seen.

Humans often do distort images when they remember them. In studying a picture for an examination in the history of art, students attempt to memorize various features that will help them to identify a work of art

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correctly. Faithful recreation of images requires storage of the image as bits in long-term rather than short-term memory followed by an accurate processing of those bits. This process is little known except for the evidence suggested by neurobiologists that involves the alterations of brain chemistry in such learning processes.

A library that wishes to store images in computers faces the problem of how to organize the bits of the images without demanding excessive amounts of memory. If the images are digitized as they are in the brain, then libraries must develop retrieval processes that are faithful and accurate. If libraries want only to store photographs, graphs, diagrams, and copies of paintings, then the problem, while difficult, is relatively simple as compared with the possibility of processing into images information that has hithertofore not appeared visually.

IMAGE PROCESSING

The most revolutionary possibility for libraries in image processing arises in the transformation of previously non-visual data into images. If a library stores verbal and quantitative information electronically in computers, and one searches for that data in categories, and if the same library has the computer capacity for image retrieval and processing, then one has the possibility of transforming verbal and quantitative data into images never before seen. Why do that? In order to conceive of a problem differently. And who will decide which algorithms to use to generate these novel images? The librarian and the research specialist will work together to develop various forms of image processing that will be tested by the fruitfulness of the results. Do the new images suggest new theories or provide new evidence?

Libraries have never been completely passive agents even though the public often perceives them in that role. How information is stored affects how it is understood. And the reference librarian not only helps the reader find what he or she is looking for, but also suggests materials that may not have been considered by the researcher and thereby shapes how the problem is framed and even perhaps the solution. Adding the fantastic capacity of image processing to the librarian's stock of information tools moves the librarian into an even more active role. The librarian becomes more of a creative researcher than merely a passive provider of archival information. The librarian as creative researcher can be metaphorically described as both a topologist and an artist.

In taking verbal and quantitative data and transforming in into images, the librarian creates geographical landscapes never before seen and thereby is a topologist. The algorithms necessary to process images from data may require the development of various forms of geometry, such as fractals, to produce computer-generated images. This does not necessarily mean that the individual librarian must learn sufficient mathematics and computer science to actually produce the algorithms. Consultants can join with librarians and reserachers from various fields to produce the algorithms necessary to generate suggestive images. In joining such a team, however, the librarian will cooperatively create new landscapes of information.

The librarian also will produce an ***aesthetics*** of knowledge. Many of the image processing algorithms generate pictures that not only display information in new perspectives, but which also take on an aesthetic life of their own. Computer images of non-linear dynamical systems, especially fractals, have formed the basis of art exhibitions (Peitgen and Richter 1986; 1988).

HEURISTICS

When the librarian processes information and creates new images, he or she expresses an artistic flair. The selection of the data to be represented visually, the choice of the algorithm to process the information, and the method of display all exhibit personal choices of the research team composed of the investigator who has come to the library to solve a problem, the librarian who has selected the relevant information from the archives (which include traditional print media and electronic storage), and the computer scientist who has developed appropriate algorithms to process the information and generate images. If the team generates familiar images such as bar graphs and trend lines, then the new images may suggest few novel hypotheses. If the team produces images so novel that they almost defy interpretation, then the new pictures are more like artistic presentations than suggestive concepts of solutions to a problem. The team processing images must be imaginative enough to push knowledge to a new frontier, but not so imaginative that their visual productions go beyond present comprehension of a problem.

Perhaps the most difficult problem confronting visualization of information is that of discovering salient features of a problem. When looking at a new image, which parts of it—configuration or shape or height or shading,—are important in understanding the original problem? The computer provides so many images and possible interpretations that the viewer may be overwhelmed with a multitude of possible suggestions for further investigation. If we imagine the researcher to be standing in the visual topographical landscape generated by the computer graphics, which mountains of information should he or she climb and what new visions can be seen from the peaks?

Many investigators do think visually; they have the capacity to take a problem and create a visual mental image of it. But image processing by a computer requires more than that; it requires a heuristic method of discovery by means of which the investigator can look at a novel image and tell which features are significant. Possibilities for developing such a heuristic are as follows: (1) the development of a decision theory for discovery and (2) the development of a form of spatial statistics that allows one to project into the future the

likelihood of the significance of a feature. Whether either of these methods could universally apply to all images seems doubtful. At this point, I can only acknowledge the problem awaiting fulfillment of these suggestions for a heuristic.

The problem of "image pollution" is similar to the problem of "information pollution" that results from the massive production of articles and books today. Librarians already confront this problem and have resorted not only to abstracts but especially to computer searches of bibliographic databases to deal with the issue. If libraries also become networks of archives of images and generators of new images through algorithmic processing, then they will have the ability to generate enormous numbers of images—many of which will be significant and many will not. How will one handle this problem; how can one look at a vast number of images and how can one tell which ones are significant? The possibility of image pollution will demand the development of a heuristic just as information pollution presently needs some method of search that will yield significant information rather than a massive amount of categorized but relatively uninterpreted data.

A heuristic for discovering significance in visual information must also contain the property of a random search. So many times in human history, discoveries have occurred through accidental juxtaposition of ideas not normally associated with each other. If the heuristic is completely deterministic, then the serendipity of unexpected discoveries will be lost.

THE ETHICS OF VISUALIZATION OF INFORMATION

So powerful are the effects of images upon human emotions that the possibility of generating new images never before seen offers the danger of distortion of information. If a viewer is presented with an image that misrepresents data, and innocently believes "it must be true" because it was computer generated from data, then the computer images threaten the very fabric of information in our society. Or, an image could be constructed from unreliable information. Such situations parallel the use of innuendo in print. But we have had five centuries to learn that not everything that appears in print need necessarily be true. False headlines on page one of a newspaper are rarely erased by a small retraction the next day on page thrity-four. And if one repeats a printed falsehood often enough, it does come to be believed by many.

Our experiences with computer images, however, are relatively recent, and we have not developed the psychological resistance (and the operation of the visual cortex may not allow this) to effectively erase a false image from our memory. The way a television camera frames an event affects not only how we "see" the action, but also how we feel about it. And recent re-creations of events and the juxtaposition of simultaneous events in two windows on the TV screen raise important ethical issues on the handling of information.

Similarly, the creation of computer-generated visualization of information raises serious ethical issues. The images can be inadvertently distorted due to the use of an improper image processing algorithm or the use of flawed data. Or the image can be intentionally distorted to achieve a particular ideological goal. The selective use of data to prove a point, thereby ignoring data that would count against a position, is nothing new. But the embodiment of this unfair and unethical use of information becomes more difficult to discover and more difficult to correct when visualized in an image. The viewer may never see the data and probably will neither encounter nor understand the image processing algorithm.

A quality assurance program for ethics must be developed for the programs presently used and developed in the future for the visualization of information. This question becomes extremely difficult because many of the images that we produce are intentionally and legitimately fictional—they are heuristic suggestions of how a problem might be solved. Other images more closely represent data already confirmed. Viewers must be told the differences between these kinds of images: those that express reasonably established data in new perspectives and those that suggest much more speculative ways of interpreting the same data. And the public must be protected from the unscrupulous use of images to intentionally mislead. Many future policies will be established upon the basis of visualizations of information, and, if the images used to determine policy are inadequate, then the policies themselves may be disastrous (resulting in a phenomenon that has occurred in the past based upon inadequate printed information). The image only makes it easier to achieve deception through its dramatic perceptual impact.

CONCLUSION

Libraries can contribute to rapid economic development in high technology by extending their computer-based information services to include image processing. Such an extension will require librarians to become active and integral parts of research teams. To be most effective, various heuristic methods must be explored to avoid banal proliferation of visual information. Finally, an ethics of visualization of information should be developed to prevent unintentional and intentional distortion of information.

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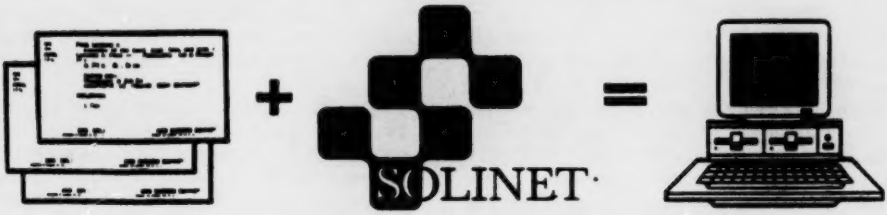

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Information and the Development of Rural North Carolina

Howard F. McGinn

The shift in the global economy from the remnants of the industrial age to the reality of the information age is forcing state and local governments to examine how information is distributed to support business and economic growth. This examination becomes most intense when looking at the creation, collection, and dissemination of information generated by public tax dollars. The outcome of the examination is serious because access to information resources may mean the difference in a rural community's decline or advance. Because information dissemination is not restricted by political or geographical barriers, rural towns, in particular, can cure decades of economic neglect caused by governmental apathy or policy and progress rapidly into becoming a player in the global economy. Investment in the tools of information access needed to participate in this new economy on the local level is quite small when compared to the investment required in the construction of the public utilities needed in a typical manufacturing-based infrastructure. Investment is not as crucial in an information-based economy as is access to the information needed to fuel and drive that economy.

The state government of North Carolina, similar to all state governments, has gradually been converting data traditionally maintained in paper format to data stored in electronic format. Microcomputer and database management software has fostered proliferation of mini public information databases in every state agency. This proliferation in the creation of public mini databases has the obvious potential to restrict access to government information as bureaucrats discover the ease of "hiding" or altering data stored on personal computers, or as they choose to sell the data to consumers in an effort to supplement declining state revenues. The proliferation, though, offers the possibility of access to valuable technical, economic, statistical, and demographic information to rural and urban communities across the state.

ROLE OF STATE LIBRARY

When the State Library of North Carolina initiated its four-year-old North Carolina Information Network, its first program offerings concentrated on the delivery of selected OCLC services and the construction of state online catalogs and union lists at Dublin, OH (OCLC headquarters). These programs have grown enormously and development of OCLC-based information programs continues unabated. Bibliographic information, however, has limited value in the development of small businesses and local economic development projects. A book will never enable a salesperson to make a sale. Much of the newly digitized state government information, however, can be used by companies and communities to make those sales, to develop new products, to land new plant facilities. The State Library, as a result, has been steadily working with other state agencies to provide the "bread and butter" data needed in daily operations. It also has entered into cooperative agreements with some agencies to create electronic bulletin boards to help publicize the work of these agencies, and it is in the process of moving from the provision of static bulletin boards to the development of interactive databases that are housed on the computer of the library's parent agency, the North Carolina Department of Cultural Resources. The most effective way to describe these bulletin boards is to provide samples of the data and describe their uses.

NETWORK BUSINESS-ORIENTED ELECTRONIC BULLETIN BOARDS

The State Library's Network maintains bulletin boards for various types of customers. Most of the development work, however, has gone into the creation of bulletin boards that can be used by businesses or that promote the activities of state agencies that work with the business community. The following listings describe these bulletin boards. The text of the description appears online. The five-letter acronym at the beginning of each description is its computer access "name."

NCBTECH—The State Library and the North Carolina Biotechnology Center have added a new electronic bulletin board, NCBTECH, to the services provided by the Library's North Carolina Information Network (NCIN). NCBTECH is a service of the North Carolina Biotechnology Center, a private, non-profit corporation funded mainly by the NC General Assembly to assist economic development in North Carolina through the support of biotechnology research, business development, and public awareness. NCBTECH features BT CATALYST, the Center's monthly business publication that serves and reports on North Carolina's growing biotechnology business community; TECHNE, the Center's quarterly newsletter that highlights news from the Center; and all current news releases from the Center. For more information on biotechnology in North Carolina or on the North Carolina Biotechnology Center, contact W. Steven Burke, Director of

Howard F. McGinn is State Librarian of North Carolina.

Education and Public Affairs, or Barry D. Teater, Public Affairs Manager, both of the Center, at 919/541-9366. NCBTECH and the 12 other NCIN electronic bulletin boards are maintained on Western Union's Infomaster system and are accessible to libraries statewide and nationally. TO ACCESS: TYPE NCBTECH.

NCDATA — A weekly service of NCIN and the State Data Center of North Carolina. It provides the most current, authoritative statistical information available in 12 general subject areas: Population and Housing; Vital Statistics and Health; Social and Human Services; Education; Law Enforcement, Courts and Corrections; Environment, Recreation and Resources; Energy and Utilities; State and Local Government Finances and Elections; Employment and Income; Business and Industry; Agriculture; and Transporation. Information is given for each county. This data updates the 1984 edition of the County Profile Book. Updates will be posted every Wednesday. Large files will be transferred on a more frequent schedule. TO ACCESS: TYPE NCDATA.

NCSTRC — A cooperative bulletin board of the North Carolina Department of Commerce's Science and Technology Research Center and the North Carolina Department of Cultural Resources, Division of State Library. Information is provided by the Science and Technology Research Center to the Division of State Library's North Carolina Information Network for a new bulletin board through Western Union's EasyLink Electronic Mail System. The bulletin board will be updated monthly. For more information, call 919/549-0671 or write Science and Technology Research Center, ATTN: Marketing, P.O. Box 12235, Research Triangle Park, NC 27709-2235. TO ACCESS: TYPE NCSTRC.

The following three bulletin boards deserve particular attention. They form the core of the state's Automated Purchase Directory. These bulletin boards list every good and service, every highway and non-highway construction purchase being put out for bid by state government. Because these listings are updated twice a week, businesses in all parts of the state can gain access to potential state business for the first time. Much of this business historically went to businesses in the Raleigh metropolitan area and other urban counties. Now rural businesses have an equal chance to gain the business, and the rural counties have a chance to gain the sales tax dollars that revert to the loval governments when such a business is obtained. The three bulletin boards described below are NCBUS, NCCON, and NCDOT, as listed online.

AUTOMATED PURCHASE DIRECTORY —
BUSINESS OPPORTUNITIES WITH STATE GOVERNMENT.
See NCBUS, NCDOT, and NCCON for descriptions. Updated every Tuesday and Friday by 3 p.m.

NCBUS — A listing of all State contracts in these areas: Term Contracts; Automotive, Construction Equipment; Highway Maintenance Equipment; Drugs; Hospital/ Laboratory Equipment/Supplies; Fuels. Also includes State contracts in these areas: Printing Forms; Publications; Office/Educational equipment and Supplies; Institutional Furniture/Equipment, Food, Textiles and Chemicals; Contractual Services, Electrical Equipment, Telephones; Data/Word Processing Equipment; Copiers. TO ACCESS: TYPE NCBUS.

NCCON — A listing of all North Carolina Office of State Construction Bids. TO ACCESS: TYPE NCCON.

NCDOT — A listing of all North Carolina Department of Transporation Highway contracts. TO ACCESS: TYPE NCDOT.

The bulletin boards themselves are quite simple in format but contain the basic information needed to help a company to take the first steps in gaining more complete information about the bid. The following bid listing is an example from recent bulletin board postings:

NCBUS
NORTH CAROLINA
AUTOMATED PURCHASE DIRECTORY
UPDATED FEBRUARY 13, 1990
AN OFFICIAL STATE PUBLICATION
Published by the Division of Purchase and Contract
N.C. Department of Administration
AND THE
North Carolina Information Network
N.C. Department of Cultural Resources
and N.C. Division of State Library

Invitations to bid received by the Division of Purchase and Contract will be opened at 2 p.m. on the specified date. Bid openings will be held in the Division of Purchase and Contract, which is located on the 4th floor, Administration Building, 116 W. Jones Street, Raleigh, North Carolina 27611.

Those vendors and businesses not currently on the Bidder's Mailing List should request a copy of the application for these lists and return a complete copy to the Division. This will ensure, upon approval, more timely receipt of all invitations to bid for the commodity area selected.

The laws of the State of North Carolina do not permit the Division of Purchase and Contract to offer preferences or set-asides to bidders. The Invitation to Bid will contain a complete outline of the terms and conditions of the purchase. Questions may be directed to the individual purchasing agent by calling 919/733-3241.

Copies of bids advertised in this directory, if not received directly from the Bidder's Mailing List, may be obtained by calling 919/733-3241.

2/12/90 N.C. DIVISION OF PURCHASE AND CONTRACT
TERM CONTRACTS TO BE RENEWED WITHIN THE NEXT THREE MONTHS

CONTRACT END DATE	CONTRACT NUMBER	CONTRACT NAME
90/05/31	020 00 0	AGRICULTURAL TRACTORS AND IMPLEMENTS BUYER: JOHN SLEDGE
90/05/31	075 00 0	TIRE CHAINS BUYER: BILL NEEDHAM
90/05/31	225 00 0	ELECTRIC WATER COOLERS BUYER: MARIANNE G. McKNIGHT
90/04/30	425 00 0	OFFICE FURNITURE BUYER: M. C. BARKER, JR.
90/05/31	450 00 0	DRYCELL BATTERIES AND FLASHLIGHTS BUYER: M. C. BARKER, JR.
90/05/31	475 82 0	DISPOSABLE SYRINGES AND NEEDLES BUYER: W. N. DAY, JR.
90/05/31	600 52 0	OFFICE DICTATION AND TRANSCRIBING EQUIPMENT BUYER: EDITH TURNER
90/03/31	618 72 0	PENS AND MARKERS, ALL KINDS BUYER: JANET POPE
90/05/31	645 00 0	OFFICE PAPERS AND ENVELOPES BUYER: DON SYKES
90/05/31	725 55 0	FACSIMILE TRANSMISSION DEVICES BUYER: DEWEY BENNETT

The network is testing a program in conjunction with the State Office of Personnel. This program will offer bulletin boards that list all job openings in state government in state agency offices across North Carolina. The following is an example of one of these bulletin boards, NCCLERK.

NCCLERK
A SERVICE OF THE
NORTH CAROLINA OFFICE OF STATE PERSONNEL,
UPDATED: JANUARY 10, 1990

AN OFFICAL STATE PUBLICATION
PUBLISHED BY THE OFFICE OF STATE PERSONNEL
AND THE
NORTH CAROLINA INFORMATION NETWORK
N.C. DEPARTMENT OF CULTURAL RESOURCES
AND N.C. DIVISION OF STATE LIBRARY

I M P O R T A N T

IF YOU IDENTIFY A VACANCY THAT YOU ARE BOTH INTERESTED IN AND QUALIFIED FOR, PLEASE SUBMIT YOUR APPLICATION DIRECTLY TO THE AGENCY LISTED. ALL AGENCIES IN STATE GOVERNMENT CURRENTLY USE FORM PD-107 — APPLICATION FOR EMPLOYMENT —WITH THE EXCEPTION OF THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL, NORTH CAROLINA, STATE UNIVERSITY, WESTERN CAROLINA UNIVERSITY, AND NORTH CAROLINA MEMORIAL HOSPITAL. (APPLICATIONS MAY BE OBTAINED BY CALLING THE UNIVERSITY/HOSPITAL DIRECTLY.) FORM PD-107 — APPLICATION FOR EMPLOYMENT — MAY BE OBTAINED FROM YOUR LOCAL JOB SERVICE OFFICE (EMPLOYMENT SECURITY COMMISSION).

IF YOU IDENTIFY A VACANCY THAT HAS NO CLOSING DATE LISTED, PLEASE CONTACT THE AGENCY/UNIVERSITY CONTACT PERSON PRIOR TO SENDING AN APPLICATION TO DETERMINE IF THE POSITION IS STILL AVAILABLE. IN ADDITION, IF THE DESCRIPTION OF WORK OR EDUCATION AND EXPERIENCE REQUIREMENTS ARE NOT GIVEN, YOU SHOULD CONTACT THE CONTACT PERSON AT THE TELEPHONE NUMBER GIVEN FOR MORE INFORMATION.

CLERICAL SERVICES VACANCIES

JOB TITLE: TEMPORARY CLERICAL ASSIGNMENTS
SALARY GRADE/RANGE: VARIES BY ASSIGNM
AGENCY: TEMPORARY SOLUTIONS
TYPE OF APPOINTMENT: PERM FULL-TIME LOCATION: RALEIGH
CLOSING DATE: CONT.
DESCRIPTION OF WORK:

VARIOUS TEMPORARY WORK ASSIGNMENTS AVAILABLE FOR SECRETARIES, WORD PROCESSORS, TYPISTS, AND DATA ENTRY OPERATORS WITH TOP SKILLS. THE OFFICE OF STATE PERSONNEL, THROUGH TEMPORARY SOLUTIONS, OFFERS OPPORTUNITIES FOR FLEXIBLE WORK SCHEDULES, BI-WEEKLY PAYCHECKS AND COMPETITIVE PAY RATES. IF YOU, OR SOMEONE YOU KNOW, WOULD BE INTERESTED IN THE OPPORTUNITY TO WORK ON TEMPORARY CLERICAL ASSIGNMENTS EXCLUSIVELY WITH NORTH CAROLINA STATE GOVERNMENT IN THE RALEIGH AREA, PLEASE CALL TODAY TO SCHEDULE AN APPOINTMENT.

EDUCATION AND EXPERIENCE REQUIREMENTS:

EDUCATION AND EXPERIENCE REQUIREMENTS VARY WITH THE TYPE AND COMPLEXITY OF WORK TO BE PERFORMED.

HOW TO APPLY: HOPE GRIFFIS
TEMPORARY SOLUTIONS
116 WEST JONES STREET
RALEIGH, NC 27611
TELEPHONE: (919) 733-7927

JOB TITLE: FILE CLERK II
SALARY GRADE/RANGE:
AGENCY: NORTH CAROLINA MEMORIAL HOSPITAL
TYPE OF APPOINTMENT: PERM FULL-TIME LOCATION: CHAPEL HILL
CLOSING DATE: CALL BEFORE APPLYING
DESCRIPTION OF WORK:
MEDICAL RECORDS; 12 MID - 8 A.M.
EDUCATION AND EXPERIENCE REQUIREMENTS:
REQUIRES GRADUATION FROM HIGH SCHOOL.
HOW TO APPLY NC MEMORIAL HOSPITAL EMPLOYMENT OFFICE
521 S. GREENSBORO STREET
CARRBORO, NC 27510
TELEPHONE: (919) 966-5224

JOB TITLE: FILE CLERK II #714
SALARY GRADE/RANGE: 54 $6,337 -$9,780
AGENCY: EAST CAROLINA UNIVERSITY
TYPE OF APPOINTMENT: PERM FULL-TIME LOCATION: GREENVILLE
CLOSING DATE: CALL BEFORE APPLYING
EDUCATION AND EXPERIENCE REQUIREMENTS:
HIGH SCHOOL GRADUATE WITH 2 YRS OF CLERICAL EXPERIENCE, PREFERABLY IN A MEDICAL SETTING. MEDICAL TERMINOLOGY PREFERRED. TYPING REQUIRED AND NUMERICAL FILING SKILLS HIGHLY DESIRED. FILING AND DELIVERIES ARE THE MAJOR RESPONSIBILITIES OF THIS POSITION REQUIRING THE ABILITY TO REACH, STRETCH, BEND AND WALK. ACCURACY AND ATTENTION TO DETAIL ARE REQUIRED TO INSURE CORRECTNESS. A PRECONDITION OF EMPLOYMENT IS THE ABILITY TO CHECK REFERENCES WITH CURRENT EMPLOYER.

HOW TO APPLY EAST CAROLINA PERSONNEL DEPARTMENT
701 EAST FIFTH STREET
GREENVILLE, NC 27858
TELEPHONE: (919) 757-6352

FUTURE PROGRAMS

The bulletin board format, while effective in transmission of lists of information, is extremely inefficient when a specific piece of information needs to be obtained. The State Library has begun a program to convert these bulletin boards into databases that can be searched for specific items. It is also expanding subject areas covered. For example, it will shortly begin loading information into the Department of Cultural Resources computer needed to create a small business buyer-supplier matching service. This program will enable small businesses to identify possible buyers of their products or identify suppliers of components for products. In conjunction with the State Data Center, dial access will soon be provided to the Center's LINK database. This database contains hundreds of data series that provide the most up-to-date statistical information about the state. By providing information of this type, the State Library and libraries of all types across North Carolina, especially rural public libraries, can provide the information that helps a company make a sale or develop a product. The state government information and other private and public databases offered through the North Carolina Information Network directly link library-supplied information with the production of goods and services. Rural areas can now participate in the global economy.

North Carolina conference delegation

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Meeting AT&T's Need for Information

W. David Penniman

I would like to discuss the challenges of information service delivery. While I will use examples from the perspective of AT&T Bell Laboratories, the changes I'll discuss go far beyond my current organization. I've collected the thoughts of a number of library leaders on the issue of change and would like to lay some groundwork with their words. Wilf Lancaster (1982, 150) says of librarians: "The survival of the library profession depends on its ability and willingness to change its emphasis and image." In the *Journal of the American Society of Information Science* (ASIS) an article by two other librarians states: "Library administrators have the responsibility to create organizational climates that encourage and promote change. Traditional committee structures are an insufficient approach to anticipate and meet the challenges. Experimentation is essential, improvisation inevitable, and the sharing of both successes and failures a professional and organizational imperative. The great responsibility, however, rests with the individual who must adapt, and adopt the idea of continual change as a goal and a mode of both personal and organizational operation" (Lusier and Dooley 1985, 47). Pat Battin (1984) says: "One of the most powerful deterrents to change in conservative institutions is the existence of strong autonomous vested interests and the fear of losing one's empire." (I'll argue that without change, the "empire" as such will be lost.)

Lew Branscomb agrees. About librarians, he states: "If libraries are to play a creative role in this period of experimentation, they must again become teachers and innovators, and not custodians, lest the treasures in their custody are made obsolete by alternative services that fail to serve humanity as imaginatively and profoundly as they could" (Branscomb 1981, 150). Daniel Boorstin has said, "Libraries remain the meccas of self help, the most open of open universities . . . where there are no entrance examinations and no diplomas, and where one can enter at any age" (U.S. Department of Education 1984). But there are other images of libraries. For example, from *The Name of the Rose* we hear this description of a library: "The library was laid out on a plan which has remained obscure to all over the centuries, and which none of the monks is called upon to know. Only the librarian has received the secret, from the librarian who preceded him and he communicates it, while still alive, to the assistant librarian, so that death will not take him by surprise and rob the community of that knowledge. Only the librarian has, in addition to that knowledge, the right to move through the labyrinth of the books, he alone knows where to find them and where to replace them. He alone is responsible for their safekeeping" (Eco 1980, 35).

In a more modern vein, from a novelist who wrote on the romantic possibilities of a public library in Southern California we hear: "We don't use the Dewey decimal classification or any index system to keep track of our books. We record their entrance into the library contents ledger and then give them back to its author who is free to place it anywhere he wants in the library, on whatever shelf catches his fancy . . . " (Remind you of some your shelvers?) This author continues: "It doesn't make any difference where a book is placed because nobody ever checks them out and nobody ever comes here to read them. This is not that kind of library. This is another kind of library" (Brautigan 1971, 20).

This leads me to the paradox of change. To keep from becoming that other kind of library, to remain Boorstin's mecca of self help, we must be committed to change and be in control of that change. Else, if we do nothing or do as we have done in the past, we will change—but for the worse. Our institutions and systems will degrade. For we are in a changing environment, and to survive we must adapt. To restate the paradox: To remain what we are we must change; if we do not change, we won't remain what we are.

For the past six years, I have been struggling with this paradox in a company that has been struggling with it also—on a grand scale. As with libraries, AT&T had a long-standing commitment to service (in their case, universal telephone service). As many libraries do, AT&T felt it had a right to a protected environment, one in which its future must be assured for the benefit of all. But the environment was changing, and many could have (and did) try to tell this giant that a new day was coming. When it finally did arrive in January, 1984, few were prepared or understood the demands the new environment would place upon them. It was into this setting I arrived, one week after divestiture occurred. I came preaching change to a premier private industrial library network involving dozens of libraries and specialized information providers. I came with many years of experience in information systems, much of it as a change agent. But I was still unprepared for the deeply embedded culture and context of an organization noted for its excellence—excellence achieved in a setting that no longer existed.

So the challenge was and is still: how to maintain excellence in a changing environment where responsiveness to customers determines who will survive. And that is your environment, too. You all have customers and (sooner or later) their satisfaction with your services and their willingness to continue to support you will determine your survival. Coming to grips with this

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inevitable truth—that your survival depends on satisfying your customers—is surprisingly difficult for many organizations that are, in fact, in the service business. Recognizing that those who make funding decisions are one type of customer, while those who receive your service are another type, is important in establishing your customer performance measures and strategies. I'll speak more about performance measures later. Let me say now, however, that there are a variety of ways to fail, but only one way to succeed—continuous monitoring and improvement across all your customer segments—and that requires measurement.

I'll discuss briefly some key ideas, involving measurement, that have helped us in our quest for customer satisfaction and survival. First, let me put technology in perspective and explain why, by itself, it does not tell the whole story for information service providers. We've seen tremendous strides in several technological areas. In 490 B.C., the fastest way to send a message was by human messenger, running as fast as the messenger could for as far as possible. Often the messenger dropped dead upon completing the task (or was killed if the content of the message was displeasing). The data rate for that "system" was well under one word per minute (probably closer to $^1/_{100}$ of a word per minute, depending upon message length). Despite experiments with semaphore towers, carrier pigeons, and horseback riders, no really universal breakthrough came until the 1840s with the invention of telegraphy. With this technology, transmission rates achieved a level of about fifty words per minute. We have reached rates of one billion words per minute, and in this decade the figure could exceed 100 trillion words per minute.

Storage capacity has made similar startling advances. In 4000 B.C., characters were stored on clay tablets at about one per cubic inch. Papyrus scrolls later improved the situation somewhat, but it wasn't until 1450 A.D., with the advent of the printing press using movable type, that mass storage became widely available via books holding up to 500 characters per cubic inch. With high density electronic, magnetic, or optical technology, this figure has been pushed to astounding levels, and by 2000 A.D., the capability to store 125 billion characters per cubic inch will be realized (Becker 1987).

Computation rates have been measured in instructions per second for some time. And for most of that time, beginning somewhere between 5000 and 500 B.C. (authorities differ on the date), a single device held the world's speed record for computation when in the hands of an expert. The device was the abacus, and the rate was literally a handful of computations or instructions per second (probably two to four). It wasn't until the mid-1940s, with the development of the electronic computer, that this figure jumped significantly. Then the rate of growth became phenomenal. In a few decades, the figure rose from hundreds of instructions per second to hundreds of thousands to one million, then 10-50 million. A rate well beyond 100 million instructions per second, in fact into the trillions, could be achieved with parallel computer architectures.

Our luncheon speaker Earl R. Mac Cormac today mentioned our relative sophistication in processng the written language. And yet, let's look at one measurement. Around 4000-3500 B.C., when the first written language emerged, humans were capable of processing about three hundred words or symbols per minute. Even with speed reading and listening devices and various other techniques, there are no order-of-magnitude changes in this figure such as we have seen in the previous measures for transmission, storage, and processing. This last barrier is symbolic, I believe, of an even greater barrier—our limited ability to make sense out of all this information being stored, processed, and transmitted.

In a book titled *Information Anxiety*, the author defines the meaning of the title as the black hole between data and knowledge (Wurman 1989). Attacking this "black hole" and closing the gap between information and understanding is our greatest challenge and our greatest opportunity. We must find human understanding and wisdom in our vast warehouses of information—in our libraries. For libraries must be first and foremost information delivery systems. In AT&T Bell Labs, they are no longer quality of worklife additions to the environment, but are becoming viewed as strategic assets that are used to contribute to the competitive advantage of the company. This positioning has been the result of a change process, and I believe the model for that process involves two bridges.

The first is a retrospective bridge (call it feedback) that compares what we said we wanted with what we have accomplished thus far (accountability). The second is a forward-acting bridge that is based on intervention, i.e., making the future develop according to our wishes, not someone else's. What ties these two bridges together (accountability and intervention) is an analysis of our successes and failures and a sharing of our experience openly with one another (as I quoted at the outset). We need to learn how to create *learning organizations*, i.e., organizations that treat every effort, every group, every program as an opportunity to share experience and to learn from that experience.

In 1985, the Library Network at AT&T developed a new approach for service delivery—a physical facility called an information access station. The purpose of our venture was to learn about new approaches to delivering information services to a technical audience accustomed to equating level of service with size of physical facility. The access station provides a combination of physical, electronic, and human resources to our customers at a unit cost (and in a space) far less than previous traditional libraries. The design built upon ideas used in the banking industry: deliver basic service via electronics; go where the customer is; give a human interface where needed, and rely on networking for service support. We have installed several such access stations and also removed some as economics dictated. And, we have

learned much about change in the process.

The access sation uses only proven off-the-shelf technologies and draws upon resources already available elsewhere in the network. It is a means of moving service closer to the patron's workplace. If this sounds familiar, it should. The banking scenario I painted earlier is a direct model for the information access station concept. The information access station provides the basic information delivery functions of a library, but does so in less than 300 ft.[2] It has been described elsewhere in the literature (Penniman 1987), but let me mention a few lessons we've learned.

Since the first access station was implemented, we learned that staffing such a facility successfully depended more upon the willingness of the individual to market and promote services than upon his or her educational background. We learned that location and configuration could play a significant role in the success of the facility. Training of the staff in the full range of systems and preparing them to function as a trainer of end users was also crucial. The hardware in the facility could vary considerably as long as the functionality was retained (i.e., mainframe vs. PC orientation was not crucial). Finally, marketing was the most vital aspect and could retain customers even after the physical presence was removed. The key point I want to make here is that the access station is as much a learning vehicle for change as a service delivery innovation.

I'd like to turn now to a second example drawn from AT&T's Library Network. Just as we are using the access station concept to extend the physical presence of our network without adding costly library facilities, we are using electronic systems to extend the virtual presence of our network. AT&T has over 4000 buildings in its domain. Less than 3% of these buildings have populations of 500 people or more. We need to deliver services to AT&T professionals regardless of their location, and we certainly cannot build libraries in all those buildings with more than 500 people. So we are relying more and more on electronic interfaces—for information searches, document orders and information delivery. We now have over 13,000 active online users who generate over 20,000 sessions per month. We are adding over fifty new users per week and reaching internationally to AT&T locations throughout the world. We provide access to over 40 internally developed databases that provide document-request and, in some cases, full-text capability.

A second, remote batch-order entry system built around an electronic-mail facade provides users with access to our services via their own local machines. With this service, they can submit database searches, order in-house documents or external photocopies, request library books or purchase books, submit reference requests, and request login access to our real-time interactive database systems. In many cases, responses are in a matter of minutes for database searches, so it is almost real-time. Even so, with a total market of over 100,000 professionals, we have a market penetration for our online real-time services of slightly over 10%. If we add the second remote, batch electronic-mail-based service to this figure, our penetration jumps to 20%, and if we include all use of our network including physical access, the figure is 30%. We still have much to do in effectively marketing our services to all our customers and reducing unit costs by increasing our service base.

I realize I am talking in business terms when I discuss market penetration, total potential market, or unit costs. I believe we must not only embrace such terminology, but also the underlying philosophy of business, if we are to survive and, better still, thrive in today's environment. For information service organizations operate in a competitive environment where scarce resources are allocated by decision-makers on the basis of perceived value. As leaders we need not only a dedication to the services we provide, but also a willingness to compete for resources on the same terms as other information-oriented organizations. I can assure you that computing centers learned long ago to understand the unit costs of their services and to argue in terms of return on investment (ROI). We must do the same. This, I believe, will require us to challenge the most fundamental philosophies of leadership in our profession.

Three years ago we funded a study of the value of our services with King Research, Inc. This study showed a return-on-investment of between 400-1000% (in line with office automation results, but still so high that many managers didn't believe the real leverage of information). In the public sector, the same return on investment for libraries could be expected for an effective literacy program considering the social cost of an illiterate child growing to be an illiterate adult. Lord Kelvin said: "... when you can measure what you are speaking about and express it in numbers, you know something about it, but when you cannot express it in numbers, your knowledge is of a meagre and unsatisfactory kind..." (Leza and Placencia, 1982). We cannot afford meagre knowledge in today's environment.

I believe there are basically two philosophies of information service leadership. First is the traditional view that information organizations are institutions that provide service of immeasurable value. Second is the view that any information service/product has a measurable value. These are two fundamentally incompatible philosophies, and I believe library leaders must make a choice in order to preserve their institutions in the evolving information-oriented society of today.

Let's look more closely at these two philosophies. In the immeasurable value approach, organizations are justified on qualitative assertions. Resources required are quantified (i.e., budgets), but output measures are de-emphasized (instead *value* is measure by volumes held or size of budget). The link between mission and output is subjective, and productivity is not (and cannot) be measured. Budgets are incremental, and

accountability focuses on resources used.

In the measured value approach, organizations are justified by quantitative assertions (i.e., improved productivity by 20%, ROI of 35%, decreased illiteracy by 20%). Resources required are quantified, but so is output. Productivity is measured. The link between mission and output is objective; budgets are programmatic where decisions are made on basis of program benefits. Accountability focuses on input and output measures.

This second approach has serious implications for the infrastructure of information-service organizations. It moves the organization and its services into the mainstream of the broader community in which it resides. It positions the library, for example, as a delivery mechanism (rather than a warehouse) with an emphasis on output, not assets. It moves information service leadership closer to key decision-makers who understand this type of quantification. It also increases the potential for power struggles (every benefit has its cost).

Consistent with this second philosophy is the idea that we have a clear mission, vision, set of goals, objectives and strategies to achieve those goals and objectives with measurable results. This means planning must be part of our standard operating environment. This planning includes the following components used in any standard business plan (Penzias 1989, 22). This means an organizational analysis that includes understanding the history, purpose, and key players within the organization must be done. A competitive analysis of other sources for similar services is essential. What are the advantages of our institution and our competitors?

Using market analysis, we must take into account the geographic scope of users served and the demographics of the users. How can they be segmented (by lifestyle, economics, etc.)? What distribution channels are used? What promotional strategies are employed? Strategy setting for specific long-term objectives is also important. This includes performance indicators to measure ojective achievement.

A management analysis identifies key functions and personnel responsible for each area (e.g., public relations, service promotion, etc.). The financial analysis includes a profit-and-loss statement, a balance sheet, and a break-even analysis. Monitoring results is crucial. We should compare results to commitments made in the business plan and adjust accordingly. Remember what I said earlier about analysis *and* intervention. We should report publicly results that include discussion of objectives and achievements. For example, at AT&T we publish an annual report of our activities that looks very much like a corporate annual report.

It's necessary to develop an integrated set of short- and long-term plans to define our own future rather than have it defined by external events. These plans must be congruent with our mission, i.e., what we are about, our bridge to the rest of the organization, and our vision, i.e., how we wish to evolve. It's our own self-generated future definition. As an example, our mission at AT&T is to provide technical, business, and marketplace information needed by individuals and groups throughout AT&T at competitive cost. Our vision, which is our own definition of our future: "to provide all professional employees throughout AT&T with an electronic window to the vast array of internal and external information services and to assure that the underlying information resources are managed as strategic assets providing a competitive advantage to AT&T." These two concepts together, what we do (our mission) and what we wish to be (our vision), give us the direction to proceed.

Ah, but you say, I'm not in charge—I'm not the leader. Someone else must do those things. That's not so. I believe that leadership resides anywhere in an organization where there are people with the passion and zeal to take up a vision and to follow that vision to make something happen. The truth is, most effective leaders are servants first—servants to their customers, servants to their institutions, and most important, servants to their visions.

My personal vision, as Director of Libraries and Information Systems, is that we will have leaders of libraries and other information services who are willing not only to be measured in terms of the value their activities contribute, but who will step up to the task of developing those measures. We must learn to compete in the arenas of power for resources, recognition, and most important, for responsibility and key roles in the future. Else we lose to others, who, as Lew Branscomb said, "fail to serve humanity as imaginatively and profoundly" as we could. Arno Penzias (1989), our Vice President for Research, said, "As I see it, a healthy flow of information separates winning organizations from losers." Note that his emphasis is on flow, not availability. That's what I'm concerned about at AT&T—information flow—and ultimately increased understanding. And I believe that should be your goal as well.

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Overcoming Political and Financial Barriers

Barratt Wilkins

Having been an observer and an intense participant in the movement to encourage library cooperative efforts for the past thirteen years, I can testify with some conviction that library cooperation is an "unnatural act."

Although the lack of funding is often cited as the principal barrier to networking and library cooperation, it has been my experience that once political barriers are overcome, the necessary funding is found to meet the need.

In overcoming political barriers, it certainly helps to have leadership with vision and manageable objectives. None of the gains in library cooperation that Florida has experienced in the past six years could have been possible without the vision of the state's legislative leadership and their commitment to the goal that all Floridians have access to the rich library and information resources of the state through automated information systems.

It also helps in overcoming political barriers if there is an understanding of the political process on the part of those undertaking cooperative library efforts. It is amazing how many people have not the foggiest notion of how things get done or how resources are secured in order to accomplish an objective. In some cases people think they understand the process, but their notions are seriously flawed.

We have also seen many situations where the policy makers and spokespersons for institutions do not really understand legislative politics and do not understand the values of library cooperation and the building of a state information infrastructure. Instead, the situation is often seen through parochial turf-guarding eyes.

Studies across the nation concerning library information networking show that among those who head those network organizations, very few see it as their role to foster this understanding and to work actively for legislation and funding to support their multitype cooperatives. Presentations of the benefits of resource and information sharing are made to a variety of audiences, but rarely to political decision makers. When network managers fail to educate political decision makers about the benefits of having a publicly accessible information network, they have no one to blame but themselves when funding is not forthcoming. They, themselves, have created the political barrier.

Early experience with the political process has led me to give much thought to overcoming barriers. General principles that I have collected during my thirteen year tenure as State Librarian and taken to heart, sometimes with great pain are the following:

—You can write an airtight, closely-argued budget request proving that the agency needs additional resources to do the job, and still not be successful if you do not acknowledge the political process and gain the support and the understanding of the issues by the legislators.

—It is impossible to lobby for statewide library programs and initiatives *alone*. The involvement and highly visible support of the library community are essential.

—There is no predictability in the legislative process. It is a constant system of rewards and punishments and you can never know all the players. Even though you may think you have all the library support bases covered on an issue, it may well be defeated for entirely unrelated reasons.

—It is important to keep the message before a legislative body or a legislator as simple as possible and in everyday language. I have seen legislative committees totally lose interest in a project when the explanation became too long and technical.

—It is important to remain as factual and accurate as possible when presenting a program to a legislative committee. Inconsistencies in statistics or rationale can quickly undermine a polished presentation and take years to recover.

—In the legislative process, it is important to lobby an issue aggressively once a position has been decided upon. Don't be a fence sitter! I have found librarians too fair in listening to the opposition, even providing them a forum to present their case. If you have adequately researched a position and have good support for that position, then do battle with the opposition until you win, lose, or compromise.

—As a private citizen, be as active as you can in local and state politics. Elected officials respect you for taking a side in support of a candidate —particularly their candidacy — even though you may lose.

—Above all, keep a sense of humor. One who can use humor can often disarm tense situations and maybe win points. While the legislative process is serious business, remember libraries have been around for 4,000 years — they will survive even our legislators.

While I view political barriers as far more critical than financial barriers, lack of funding is still cited as the most important barrier to multitype library cooperation,

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networking, and information infrastructure development. A financial barrier is the easiest for people to understand. I believe defining and structuring a network in a thorough plan of development, expenditure, and user benefit which is well marketed to political decision makers is a far more useful expenditure of time than trying to determine the source of funding. Our job is to present the case for utility and efficacy of the program; it is up to the legislature to determine how to fund it.

However, as I have been asked to discuss financial barriers and possible solutions, let me offer a few insights. The most important insight is to live in a state with money. The second insight is to live in a state where there is a sound and stable taxing strategy, where there is sufficient political will to tax and allocate those revenues to services the public is willing to support. Are there any states where both occur?

Most studies cite state funding as the most desirable for ongoing stable support for multitype library resource and information sharing. Federal funds represent the easiest developmental funds to secure but are generally recognized as "soft" and dangerous to incorporate into ongoing operational support.

Membership fees for network operations are possible if the libraries are large enough to afford the level required. The cost benefit for services must be demonstrable. In some cases networks may also offer membership dues scaled by the size of the library, or the amount of the acquisitions budget.

Service fees are another option usually packaged so that members pay only for the services they use. A market dynamic will work here. I believe SOLINET provides a desirable and popular program of continuing education and training and realizes important income from those service fees.

Private and government foundation funding has provided another source of funding for resource sharing. The more important of these are the National Endowment for the Humanities, the National Science Foundation, and the Ford and Kellogg Foundations.

Donated and in-kind services can be a source of temporary support. I would not build a network on this type of support, however.

In conclusion, I think partnerships between business, government, and libraries such as those represented at this conference can significantly aid in forging solutions to political and financial barriers. I have found that when we work together we can accomplish more. Someday, I hope to be proven wrong in my first stated conviction that library cooperation is an "unnatural act."

Florida conference delegation

Implementing Change in the Development of an Information Infrastructure

Ralph E. Russell

Overcoming barriers is our topic for this period; my particular assignment is to present some ideas on overcoming the human barriers which emerge whenever change is imminent or proposed. There are two representations from recent popular culture which will graphically and succinctly summarize (and oversimplify as well) much of my treatment of the topic. The first is Pogo, the winsome citizen of the Okefenokee Swamp in South Georgia; he gives us the definition of the problem. Eloquently he states, "I've met the enemy and he's us!!" So much for the problem statement. The problem in implementing change is people.

The second representation contains the solution. It is to be found in the philosophy which permeates Robert Fulghum's first book, ***All I Really Need To Know I Learned in Kindergarten.*** His credo admonishes us to play fair, share everything, live a balanced life, and look out for each other (Fulghum 1988, 4). There are many more details, nuances, interpretations, and applications required but basically, treating people with empathy, respect, and politeness will gain you much of the distance in overcoming any type of human barrier. Those are the broad brush strokes; now let me fill in some detail! There is a quote from Warren Bennis' book, ***Beyond Bureaucracy,*** which nicely sets the stage for our discussion:

> The biggest single problem of technology, it seemed to me...was not merely to accept the inevitability of bewildering, upheaving change..., but rather to manage and control it. The supreme question was whether man must forever, as in the past, be tossed and blown by change, or whether he can, by rational foresight, conscious effort and plan, become "proactive" enough to control, at least in substantial part, his own solution (Bennis 1966, viii).

The purpose of this conference is to prepare us to be proactive enough to control, at least in substantial part, our own future.

It is evident that the managers and scholars who write on change and implementing change agree that the technical problems are less complex and more easily resolved than the people problems (Moriarty and Yeager 1982, 20). Because people do not always respond rationally and because change of any type can threaten us and stimulate anxiety, the introduction of change should always be encased in much sensitivity to the perceptions and reactions of the ones who must use, benefit from, and be affected by the change. Alice in Wonderland succinctly stated the dilemma change can cause:

> "Who are you?" said the caterpillar... Alice replied shyly, "I—I hardly know, sir, just at present—at least I know who I *was* when I got up this morning, but I think I must have been changed several times since that." (Carroll 1969, 49).

Change is usually resisted by human beings. The reasons for resistance are varied and include:

- violation of professional ethics
- inertia
- uncertainty
- misunderstanding
- fear of loss
- personal antagonism
- lack of confidence in the agent of change
- lack of participation
- failure to see the need
- bad timing
- disruption of social relationships
- upset power balances
- informal organizational pressure
- belief that change equals criticism
- perception that benefits may result from resistance to change (Weinbach 1984, 283-84)

As Weinbach (1984, 284) states,

> "Many sources of resistance to change have one thing in common: they result from a person's recognition or belief that change may depreciate the value of her or his experience."

Darryl Connor adds that change "disrupts a person's frame of reference if it presents a future environment where past experiences do not hold" (Anonymous 1985, 3). And people may react by trying to retain some control over the situation. Their control may be expressed by clinging to the status quo and monitoring resistance to change.

And resistance to change there will be. Eugene Bardach sees implementation as a game and describes some of the tactics by which participants (1) divert resources from a project; (2) deflect its goals; and (3) dissipate its energies. In his review of public law and its implementation, Bardach (1977, 38) found that many supporters of legislation were supportive "only because they expected to be able to twist it in the implementation phase to suit purposes never contemplated or desired by others who formed part of the original coalition." A

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lesson readily learned from counterimplementers or resisters is that overt opposition need not be staged or mounted. It is usually sufficient just to bide your time and rely on delay and tokenism to do the project in (Keen 1981, 28).

A typical strategy of counterimplementers may include:

1. Lay low;
2. Rely on inertia;
3. Keep the project complex, hard to coordinate, and vaguely defined;
4. Minimize the implementers' legitimacy and influence; and
5. Exploit their lack of inside knowledge (Keen 1981, 30).

Sara Fine (1986, 84), in her landmark article on technological innovation and resistance underscores a basic truth:

> . . . no matter how much benefit a proposed change will bring to the organization, no matter how meticulous the planning strategy, some individual will resist the change, either through active aggression or passive retreat. Some organizations will fall into apathy or confusion and conflict as they engage in the painful process of reshaping and restructuring.

The negative and counterproductive means by which people cope with change comprise a long list; I've hit just a few of them. Our challenge as implementers of change as we develop an information infrastructure, however, is to overcome those human reactions, barriers, and resistance. Let's talk briefly about ways to do that.

In order to base change on a logical and legitimate premise, it is desirable to document the status quo and the dissatisfaction with the status quo. Why are we making a change? Most of us are less prone to accept and "buy into" a change when we do not understand the need for change ("What is wrong with the way we used to do it?") Make graphically clear "what's broke and how and why we're gonna fix it!" Weinbach (1984, 282) calls this part of the process unfreezing: ". . . an individual must become sufficiently uncomfortable with the old way of doing things to want to try something new."

Techniques to help accomplish this include appeals to professional values or ethics, logic, bargaining, or threats. Remember the list of reasons for resistance? Uncertainty about the change and failure to see the need for change figure prominently in that list. This is the opportunity to counteract those reasons by making explicit the laundry list of "what's wrong with the way we've always done it!"

After we've accurately described the status quo and its warts, we must talk about where we're going. Isn't it normal for all the travelers to want to know the journey's destination? An accurate and complete description of the proposed change should be prepared and disseminated widely to all participants. It was noted by Hirschowitz that the more information individuals have about a proposed change, the rationale for the change, and the process by which the change will be implemented, the less likelihood there will be for misunderstanding, misinterpretation, and grievances. Lacking accurate information, the grapevine functions frantically, imaginations run amok, and much energy is required to deal with them (Hirschowitz 1974, 14). We all want to be "in the know." To be privy to what's happening is the first requirement for an individual worker's self-esteem; to be omitted from that information declares one (or so it may seem to the individual) to be of lesser importance. If information is power, as most of us believe, then those excluded from the information loop are truly powerless.

> . . . workers who receive clear information about how a change will directly affect the organization and their role within it will accept change significantly better than those who do not receive this information (Baker 1989, 56).

Historically, resistance to technological change has been violent and spurred by ignorance and misunderstanding. Karl Marx describes a loom invented in Germany in the early 16th century. A city official, concerned that thousands might be unemployed if this machine were used, had the inventor strangled and drowned. There were riots and official actions against the machine in Germany, Holland, and England. An imperial edict prohibited it ultimately in all of Germany. The loom, which shook Europe to its foundations, was the antecedent of the mule and power-loom and of the industrial revolution which eventually followed (Marx 1936, 467).

Fine (1986, 89) continues her historical review of resistance:

> In 1758, the first wool-shearing machine driven by water-power was set on fire by 100,000 people. The tremendous destruction of machinery that took place in the manufacturing districts of England in the early nineteenth century, chiefly in reaction to the power-loom, became a pretext for the most reactionary and forcible measures.

Now, if we're agreed that it is important to document the status quo and describe fully the impending change, it is also important that those participating in the implementation and those affected by the change have the opportunity to discuss the change in an open and supportive environment. Change may be introduced with opportunity for discussion and questions in small groups. Concerns may be focused on details or may require even a smaller venue to encourage candor or to air limited concerns. Change should not be presented as a criticism of the present workforce.

Although we've documented the status quo, described the change, and introduced the change in the appropriate venue, it is critical that the relevance of the change to individuals, groups, and organizations be clearly drawn if the probability of successful implementation is to be maximized. "What's in it for me?" is a question most of us ask when considering a change or revision,

particularly since there is usually risk involved. The relationship of the proposed change to the self-interest of participants should be clearly defined. Again, you're addressing the "what's in it for me?" question. An experimental study determined that persuasion for change which emphasizes the self-interest of the individual is more effective than a strategy which emphasizes the value of change for the organization (Sagie et al 1985). In other words, higher profit/less overhead/less cost to the organization is not nearly as persuasive an argument to a worker as the rationale that the work is easier or more profitable for the worker. "What's in it for me" is more important than "what's in it for the organization."

The rationale and objective of change should be clearly tied to organizational values. When the change is criticized or disruptions or stonewalling set in, the link to the mission or purpose of the organization should be reviewed; the clear manner with which change enhances or extends accomplishing that mission should be articulated. As long as organizational values are clearly stated as underlying premises or objectives, decisions and events can be coherent and understandable. Without such clarifying goals, the process and rationale for change are likely to be muddy and less effective. They should be communicated clearly and frequently to all participants. The failure to recognize that a proposed change, or the process by which it is implemented, possibly offends the values of the organization or the participants is the most important oversight of management, according to Fine. She continues:

> The negativism and outrage that results from the violation of traditional and cherished values will compromise the employees' identification with the organization or the profession (Fine 1986, 92).

There will be numerous concerns of staff; they should be addressed in a forthright manner. Change is a threat to most of us in that it can either disrupt or be perceived to disrupt relationships or may potentially cause termination of our employment. Whatever the specific focus of the fear, fear is a debilitating human emotion and should be dealt with quickly and openly. Baker (1989, 55-56) suggests that employees respond better to change when management consciously tries to ease employee fears by:

1. Providing as much advance information about the change as possible;
2. Informing fully affected employees of the reasons behind the change;
3. Doing everything possible to clarify employees' questions about the changes; and
4. Giving employees time to reflect on how the proposed change will affect them, the organization as a whole, and their clientele.

The best antidote to fear and anxiety is constant and full communication among all levels of the organization. Kotter offers a succinct example of no communication, little trust, and anxiety, which fed the fear of people faced with change. The president of a small company announced that they would implement a flexible scheduling option for employees. His intent was to make working conditions at his plant more attractive, particularly to clerical and plant personnel. Rumors began to circulate among the employees; most were uncertain what flexible working hours meant. One rumor was that people would have to work whenever supervisors told them to work—including nights and weekends. The employee association (a local union) had a quick meeting and presented the president with a non-negotiable demand that the flexible hours option be dropped. And it was dropped (Kotter and Schlesinger 1979, 108).

Clearly, implementers of change should define the objectives of change. Why are we doing this?

Many and diverse segments of the population who will be implementing and dealing with the change should be involved. Involvement and staff participation, for instance, will enhance the likelihood that the staff will push harder to make the change succeed. Participation is crucial if they are to "buy into" the change. The individual's perception that he/she has an element of control over his/her own life is an important factor in that involvement as well. Participation and involvement have costs and risks. They can be time consuming. With poorly articulated objectives, inadequate guidance, and a deficient process, the overhead can quickly exceed budget and the results disappoint everyone.

The potential benefits from participation, however, far exceed the risks an organization takes in such a process. Staff who participate in the development of change are more likely to accept; in planning change, they are also the likely individuals to tell you what is needed for them to be more productive. If a person has had a say in the evolution of a thing or idea or process, there is the implicit tendency to identify with it and to have a feeling of some control.

In some instances, the individual may go beyond compliance with the change to commitment to the change. Corporate politics and the informal grapevine are a factor in communicating and mobilizing the talents of an organization. Because fear and anxiety are normal reactions to the introduction of change, alliances and coalitions may form against the proposed change. The smart change agent will be proactive and address problems and issues quickly and candidly (Moriarty and Yeager 1982, 19).

I know an administrator who shamelessly identifies the chief grapes on his organization's grapevine and keeps them fully informed of unfolding events. The most positive situation is a win/win context. The change agent (or change master as Rosabeth Moss Kanter calls that person) clearly communicates to key persons how they can have what they wish to have with the proposed change. And, the manager might engage in a little manipulation as well. Kotter calls co-opting an individual

a common form of manipulation: giving a leader (or the chief grape on the grapevine) a desirable role in the design or implementation of the change (Kotter and Schlesinger 1979, 110). Manipulation and coercion are two possible management responses to resistance to change. Both are risky and are outside the values structure of healthy organizations with which I am familiar. In fact, Fine concludes that such managerial strategies contribute to resistance. She condemns the use of coercive strategies where reorganization was arbitrarily imposed and functions changed with no consultation, explanation, or preparation. The worst is a "take it or leave it" strategy (Fine 1986, 91).

Any change which is significant should come with the imprimatur of the chief administrative person in the company of government or organization involved (Maskovsky 1982, 77). And, the web or support must include visible and influential individuals throughout the organization.

Gaining management support usually consists of more than a single presentation which promises grand changes. The interest of management must be maintained and cultivated by a series of communications and interactions. The participation of senior and middle management in planning and implementing change is crucial, particularly with an objective of subsequent compliance and commitment, to the entire organization.

In the litany of resistance measures to change and the tactics that an insightful change implementer will employ to introduce change, there is one reaction which is pervasive unless remedied. That reaction is uncertainty, anxiety, and/or fear. Since we don't live in a laboratory, there is usually little opportunity to experiment and "try it on" prior to implementation. For a worker, the change may affect job performance and potentially his/her livelihood. At the least it may tear the social fabric and fly against local customs. And we certainly ought to learn from our mistakes. One of the most prominent mistakes in the past several decades is the emergence (and decline) of the typing pool in corporate America. In terms of efficiency, it made sense. From the perspective of the social fabric and the needs of human workers, it was anathema. Critics who've evaluated the concept and its demise point out that:

1. It took the diversity out of the secretary's job;
2. It diminished opportunity for loyalty to department, managers, and co-workers;
3. The typing pool staff reported to a supervisor, often a peer; and
4. The environment was usually poor—noisy, hectic.

There was little anticipation or concern for how such an organizational change might fly in the face of local customs and people's needs (Maskovsky 1982, 74).

The people problems (or human barriers) in developing and implementing an information infrastructure are formidable. For the successful manager to navigate the difficult shoals of human interaction and communication and then to fail because of inadequate or insufficient equipment or staff is unthinkable. Sufficient resources for the task are crucial. Nothing is more frustrating than expectations that one will do something and then have insufficient resources to accomplish that task—regardless of how talented, willing, or skilled the worker might be. Ginzberg's (1981, 54) research determined that commitment of necessary resources through the stages of development and implementation is one of three critical issues central to a successful implementation of management information systems.

Poppel (1982, 146-55) points out that it is common for personnel resources to be reduced just at the time when staff are experiencing the heaviest stress of change.

The difficulty in introducing change predates the industrial revolution. Niccolo Machiavelli (1963, 22), from the viewpoint of the sixteenth century, said.

> We must bear in mind, then, that there is nothing more difficult and dangerous, or more doubtful of success, than an attempt to introduce a new order of things . . .

We are dealing with human nature. Resistance to change is not unique to our century or our country. It is a universal characteristic. In the last three decades, however, we have begun to understand more about the motivation and viewpoint of organizations and individuals who make up those organizations.

Human barriers—or resistance to change—are not intrinsically good or bad. They are, however, essential agenda items for any individual or group (change masters, if you will) who wishes to implement change. As Sara Fine (1986) says:

> Perhaps it is also the lesson of history that resistance to change is just as crucial to our survival as is acceptance of change. Perhaps the purpose of resistance is to give us pause, force us to slow down, and impel us to pay attention to our basic human needs and values.

See? Holding hands when you cross the street, warm cookies and milk and respect for others *will* carry the day!

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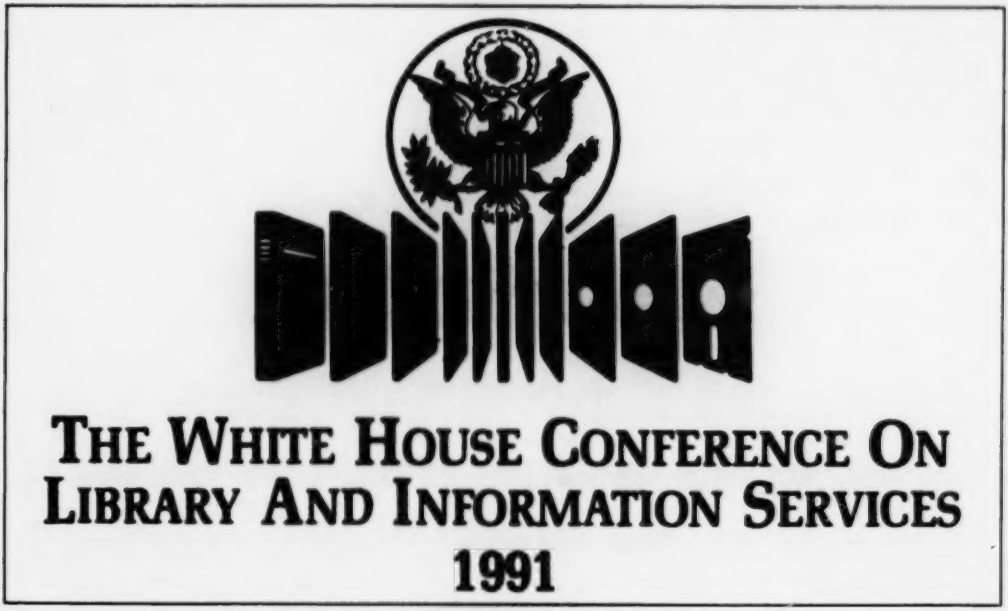

THE WHITE HOUSE CONFERENCE ON LIBRARY AND INFORMATION SERVICES 1991

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Raising Anchor, Casting Off: Information Technology and Economics in the Southeast

Jerry D. Campbell

There is an air of expectation everywhere as the information age progresses. Things are always about to change. Things are always about to happen. Breakthroughs in information technology — revolutionary possibilities — and the plethora of information that accompanies them are boiling up on the horizon like a storm at sea. Of course, we are aware that they are there. We've heard their thunder and seen their flashes. But we do not really know how to measure the size of the storm. We only know that it will, one day, come blowing in.

We are increasingly focused on — even distracted by — this storm of revolutionary possibilities. We want to know what they are and what they can do for us. We want to know what's going to happen to our businesses, our work. In a more personal vein, we want to know what's going to happen to us in the midst of this revolution. I suspect that we are each suffering from a kind of emotional paradox: we love the excitement of the storm, but we hope it will just pass us by. In the information age, we don't know whether to expect the fulfillment of our greatest hopes — or the destruction of our own viability in a world racing beyond our personal capabilities and training.

So we come together to ask one another what we think. What have you glimpsed in the storm? How does it compare to what I have seen? Can we ride this one out? Better yet, can we use its power to fill our sails and take us to distant and wonderful destinations?

Even as we ask these questions, which, of course, is a useful and necessary enterprise, we are vaguely aware of the questionable dependability of foretelling the future. We are separated only by time and technique from the ancient Greeks who sought Apollo's revelations through the Priestess Pythia at Delphi. Living in this age of science, we are also most keenly aware of the tenuous effect our deliberations will have in determining the actual shape of future events. In a way, we are not so unlike Shakespeare's weird sisters from *Macbeth*, bending over a cauldron.

By our deliberations, we too want to shape our destiny. We are different only in that ours is the cauldron of reason with a brew of data, information, and analysis. And we hope to affect the shape of the future not by means of magic spells and incantations but through communication, persuasion, and good planning.

Looking to the role of information in the economics of the Southeast for the future, I have stared into the cauldron and discerned three features of information in our economic future.

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INFORMATION AS CHANGE AGENT

In the first place, information is the quintessential change agent. It has, so to speak, a Midas touch, affecting everything. As a change agent, it is an exceptionally powerful force. We may speculate, for instance, that information fueled the changes now taking place in Eastern Europe. Ideology cannot triumph over the reality of change in world cultures brought about by the information age and the accompanying concept of world community. And the economic impact of the changes in Eastern Europe will be pervasive throughout those societies, not to mention this and every society to which they relate.

So we may assume that, even if we wished it, the Southeast could not escape its transforming presence. As a change agent, information takes many forms. Here in the Research Triangle Park, it is microelectronic research that almost daily improves the central tool of the information age, the computer. The computer, in turn, becomes each day more deeply enmeshed in the fabric of our economy. Or it is biotechnological research capable of transforming an already mechanized and sophisticated agrarian region in ways undreamt. I recently read, for instance, that one biotechnology firm is finding promise in the use of genetically altered tobacco plants to copy and produce human proteins. This is a new and incredible idea that offers at least an outside chance that tobacco farming might be revitalized and reimaged as a savior rather than a destroyer. Eventually, and sooner than later, some information will come along that changes what you do.

As a change agent, information is not automatically benevolent. While change holds before us the wondrous potential for realizing our dreams of work, food, and housing for all, it can also be for the worse. A region can change by becoming outmoded and depressed in its economics.

Just recently, in North Carolina, some regulatory agency found benzine in Perrier bottled water. News of it flashed worldwide. Reporters speculated whether Perrier would recover from the market impact of the negative information.

Whether or not our economics are affected for better or worse depends a great deal upon how well prepared we are and how creatively we respond to the content and pace of this information-oriented world. Richard Wurman hypothesizes that "we are what we read." With the wisdom of common sense he notes that "the information

we ingest shapes our personalities, contributes to the ideas we formulate, and colors our view of the world" (Wurman 1939, 20). If David Osborne was correct in his address on Wednesday that while we cannot compete with wages of 88 cents per hour we can maintain our role in the world of ideas and creativity, it is essential that we ingest the right information. One of our economic challenges in the Southeast, then, has to do with how much and what information our business men and women get their hands on.

INFORMATION AND MORE INFORMATION

The second revelation I've dredged from the cauldron is that there is no theoretical limit to the amount of information to be forthcoming from humankind. No limit. I cannot imagine that someone, somewhere, sometime will think the last thought — completing all knowledge, incorporating all data, knowing everything there is to know. Information is infinite. It is also like a snake eating its own tail. It feeds upon itself. And with every bite it grows larger and stronger. The more we know, the faster we learn.

Practically speaking, this means that businesses will have to change more frequently in this new age. Periods of stability will be shorter, but new opportunities will appear more often. The trick, of course, will be keeping up — staying tuned in and current with dynamics that affect your business.

The limitless prospects for new information will increasingly challenge our economics for two additional reasons. On the one hand, our information handling institutions, including libraries, are already overloaded. To keep pace with the outpouring of the human mind, these institutions will have to change — in ways we are only beginning to hypothesize. We do not know how to propose a new economic system for information handling itself. How much should information cost? Who should pay for it? So managing information itself will be an economic challenge to the region.

On the other hand, the already vast and still growing amount of information will increasingly present an access problem to business people who just want to know something simple but specific. More information is not necessarily better. Professors are indispensable to education not because they know everything, but precisely because they do not. Rather, they know certain things exceptionally well — well enough to direct students to the right information. In the same fashion, libraries succeed not because they are able to collect or provide access to everything, but because they have become adept at knowing what to collect to meet the specific needs of their particular constituencies.

It follows that the challenge of this information-rich environment is to place just the desired information into the hands of business men and women at just the proper time — a manageable amount of the right information. With regard to the question of how much and which information is desirable, I am reminded of a chapter from a book of advice for doctors. Recognizing the rapidity of change in the medical profession and the urgent need for physicians to keep pace, author Oscar London (1987, 53) simply advises his readers to "review the world literature fortnightly." Such is the magnitude of information available that we temper our desperation in facing it with satire and humor.

WHEELS WITHIN WHEELS

The third and final revelation arising from our cauldron is that this information explosion will force us to refine our private and governmental structures for managing our economic structures. We are now too much arranged like city-states — isolated, territorial, independent, neither knowing what the other is doing. We are arranged into businesses over here, libraries over there, governments somewhere else. The problem is, no one of these institutions can cope with everything going on — no one is big enough or wealthy enough or smart enough — to cope with the information dynamics necessary to understand world and local trends and how correspondingly to position regional or local economies. If we hope to succeed for our localities or our region, we must rise above unenlightened, competitive self-interest. We must create an information management structure that incorporates but transcends our individual operations.

The model for this information management structure is already emerging. The information deluge is dragging it out of us. That model, we might say, is one of wheels within wheels — or more accurately, a network of networks. We are here making connections, establishing linkages, among an assortment of existing networks. We are taking the next steps upon which the economic destiny of our region will, to a large degree, depend.

CONCLUSION

Information is a change agent that will force our economy into a pattern of frequent changes in the years ahead. At the same time, if we permit it, it can also tell us how to change for the better. It is, we might say, both the problem and its own solution. The key to managing this change is aligning ourselves into a network of networks capable of understanding our own regional needs and resources, capable of perceiving larger world dynamics that affect us, and capable of delivering crucial information at the local level with precision.

If the information age may be likened to a gathering storm, these next steps are essential. Storms may be life-giving or life-threatening. If we sit at anchor in open seas, we will be swamped. But if we act, if we raise anchor and take the helm, we can harness the power of the storm.

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Closing Remarks: An Overview of the Conference and a Look to the Future

Edward Holley

To summarize what we have done in the last couple of days here is obviously impossible. I want to say at the beginning a word of appreciation to all of you and for all of those who made this stimulating conference possible. It's a conference which many persons have referred to as mindboggling and eye-opening. That's certainly a view which I share.

I think this has been an unusual conference from the point of view of the high quality of speakers and the participants. It's been a diverse group and I think that's been healthy. I'm particularly impressed with our colleagues from the business and government sector who have made so many contributions to our discussions. We are very grateful to you. You have given us some tremendous insights into how we can work together in a partnership to advance the cause, which many of our speakers have indicated is so essential to our society as a whole and particularly to those of us who live in the Southeast.

I am impressed that all of the speakers took their task seriously. They were well-prepared. There was little breast-beating or mea culpas which are so often characteristic of sessions like this. There was a genuine interest in finding answers to how we, through information and technology, can assist in the *development* and *growth* of the economy of the Southeast, to use Jesse White's terms. I particularly appreciated his distinction between the two: growth being short-term and development being long-term. I especially appreciate the commitment of Secretary Dorsey and the North Carolina Library staff under the leadership of Howard McGinn, as well as the indefatigable efforts of OCLC staff member Clarence Walters, who has so ably coordinated all our activities. Only those of you who have been involved in similar activities can appreciate just how much we owe to Clarence. Clarence we do indeed thank you.

In Doris Betts' words in the Southern Growth Policy Board's *Halfway Home and a Long Way To Go*, you have demonstrated in this conference how "we can honor the past while moving into the future and building for ourselves and our children, a resilient, competitive, and humane society which will bring us a lot closer to home."

What specifically have we accomplished in this conference on *The Role of Information in the Economy of the Southeast?*

First, we have dealt with the realities of Southern society, only a short decade from our entrance into the 21st century. Thirty years ago in his Godwin Lecture at Harvard, Clark Kerr predicted that the universities would do in the last half of the 20th century what railroads did for the last half of the 19th century and automobiles did for the first half of the 20th century. Expanding on Kerr's predictions, this conference asserted that access to information through technology will do the same for the first half of the next century, that is, it will be the key to our future development and progress. One analogy which emerged was that telecommunications networks were the highways of tomorrow. It makes one wonder if we really do need to bring a four-lane highway within easy reach of every North Carolina hamlet!

Second, and often unusual for such conferences, we not only have heard overviews of the changing world of technology, information, globalization, etc., we have also been presented hard data on the current demographics of the Southeast—what our background is "halfway home," and also where we stand in relationship to our economy, our human and intellectual resources, and the political process. And, if there's one thing where we as librarians so often fail, it's that we do not look closely at the demographics of our situation. That's surprising 60 years after the work of the Graduate Library School of the University of Chicago.

Third, we have discussed illiteracy in our society, not just those who cannot read, write, speak, and compute, but also those who do not know how important information is for economic development and where it can be found, whether in libraries or in local-state-national databases. We have suggested that this lack of knowledge must be remedied through a marketing program which informs our citizens, our public officials, and our business leaders of their existence and promotes their use. This approach is surely in line with our democratic principles as enunciated by Mr. Jefferson that no republic can be ignorant and free. It must disturb you, as it disturbs me, those of us who are Tarheels, the statement of White what 40% of the adult

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blacks in North Carolina are functionally illiterate.

At the same time, as we discussed the workplace and the change in the workplace, I was surprised that, except for Chuck Fienning this morning, no one has mentioned what some other futurists have noted, that this country will soon experience a serious labor shortage which is already developing in Europe and particularly in West Germany, though it may be solved for the latter, at least temporarily, by the merger with the East German population. Let me suggest for librarians, in terms of the U.S. Department of Education's three volumes, that this means ***Rethinking the Library in the Information Age***. As ***Halfway Home*** recommends, "Improving information is step one in improving planning and solving problems." To do that will require knowing users and user needs, which may not be the same needs we have often assumed they were. As Ben Speller said in a humorous comment in our group, "School librarians don't know the territory, public librarians don't know the territory, and academic librarians don't ***want*** to know the territory!" Now Ben may have overstated the case but his phrase should certainly give us pause. In the words of some of our colleagues in the government and business community: "We often don't ***know*** what we don't know." That theme came up again and again in our two days of deliberations. One of the problems is that librarians speak to librarians, politicians talk to politicians, businessmen and women talk to businessmen and women. I think that we all agree that situation cannot continue. The example of the Denver Metro program should give us courage, for that planning/development program began with an assessment of the problem and resulted in an innovative cooperative with the Colorado Alliance of Research Libraries (CARL) for the use of information with benefits to all.

In his remarks about our task, Dr. White unknowingly paraphrased Melvil Dewey, the Patron Saint of librarians, both cursed and praised by them, when he said, "Our goal is linking the right information to the right person at the right time." Jerry Campbell echoed that point this morning.

This leads to the fourth point: We must provide information ***together***.

Cooperation is a long and honorable tradition in librarianship. Indeed, when universities ***talked*** more about cooperation than they ***engaged*** in cooperation, the best example their plans could often point to was the library and interlibrary loans. But we are a long way down the road from those simple times of twenty years ago and the efforts of the fifties, sixties, and seventies. I am astounded at how far we have come. Some of you weren't around at the birth of institutions like OCLC and SOLINET, which are less than 25 years old. Thanks to these programs, through technology and cooperative effort, no person in our society need be denied access to any information he or she needs for economic progress and the quality of life.

Service industries, as we have been told, can be anywhere. Health care, a big problem for the future and especially for those like me who are headed for the geriatric life shortly, as well as recreation and information needs in retirement communities in this state and in other states in the Southeast (notably Florida), are going to need major information and recreation resources. It is certainly up to the Southeastern libraries to participate actively in serving those individuals. To do that, as was repeatedly emphasized, we need skilled information workers in a variety of settings. We certainly need librarians who have been retrained or who are currently being trained at this sophisticated level at places like the University of North Carolina at Chapel Hill.

In one of the most impressive, "gee-whiz" presentations I have seen on technology, Earl Mac Cormac gave us some splendid visuals, but he gave us something else as well. He reminded us that the change from the printed word to the visual image is one which calls for a new look at ethics, and the quality of ethics in our decision-making, and the importance of being aware of the accuracy of visual information. That's different from being aware of the accuracy of print information, but the visual does share some qualities in common with print. I was very happy that we had Earl Mac Cormac here to remind us of these ethical concerns.

The fifth point is the importance of leadership, which is both broad and deep, as opposed to our traditional "good ole boy" network, and a real understanding of the importance of how that leadership now includes and will include in the future even more women and minorities who are a neglected resource. It's going to take tremendous leadership in all areas of our society if we are to face this information age, with all of its changes and all of the rest of the things that are going to wrench our society, and still come out of it whole. We had a very interesting presentation from Dr. Bahl, recently from New York, who suggested that we in the Southeast not follow the examples of New York. Any of you who have ridden in taxis in New York City recently know how appropriate that advice is. One of the things he said we have going for us in the Southeast is that we do not have a decaying infrastructure which we have to rebuild at

enormous cost because we didn't keep it up all along.

The importance of rethinking tax policy seems to me inevitable and also one of the things our society does poorest. We don't like to rethink things that involve money. While it is quite true, as some of our colleagues reminded us, that money is not the most important thing (and I agree with that), we certainly will not be able to achieve our objectives in an information society without it. Barratt Wilkins this morning talked pointedly about the importance of the political process. While some of us might disagree with the extent of involvement that he suggested, Wilkins' points were very well made. If Jesse White is right and we are ill-prepared for the 21st century, then it is absolutely crucial that we have creative, visionary leadership, though not necessarily charismatic leadership. I think there is a difference. Ralph Russell's comments on leadership this morning were very much to this point.

Sixth is the importance of the infrastructure. Building the infrastructure is the most difficult thing of all and it can only be done, it seems to me, with the public-private partnership which underlies this bringing together of people of diverse talents as the basis for this conference. We should remember Bob Hayes' report a few years back entitled "Public Sector/Private Sector Interaction in Providing Information Services (Washington, D.C.: National Commission on Libraries and Information Science, 1 February 1982), which may have been a flawed document, as some of my colleagues noted, but which is worth studying again and thinking about as we have come more and more to realize the validity of that partnership. Hayes' UCLA conference on Libraries and Information Economy of California (1985), which UCLA printed and distributed, is another appropriate document that you may wish to examine in terms of our problems in the Southeast. And I do think we need to heed the admonition of David Penniman who last night told us that we, like AT&T, are in the customer business. Some of my librarian friends don't like to talk in that language. Sometimes they criticize us at OCLC for being too businesslike and not sensitive to the needs of librarians, to which I often point out that 9 of the 15 OCLC Board members are required to be professional librarians. Under these circumstances it is difficult to suggest that OCLC can be insensitive to the needs of librarians. Nine out of 15 will get you a majority in anybody's mathematics and you don't need multiple regression analysis to realize that.

Seventh, we need to take advantage of what already exists. It was interesting to me to hear about Metro Denver and CARL—about which I knew little—and about the innovative projects of the North Carolina State Library. We should remember Frank Grisham's SOLINET and also OCLC, both will be very much involved, or should be involved, in what we do as we plan for the future. There is no need to reinvent the wheel. We have neither the resources, the time, nor the energies to do that, but we do need to be involved in re-thinking, retraining, and the willingness to cooperate—what Wayne Smith termed at the beginning of this program the "strategic alliances." We have to realize that we don't need to do everything ourselves. Tom Clark said cooperation is a real pain and it's not pretty. All of us who have been involved in cooperative projects (and I have for the last four decades of my life) know this all too well. What's needed is both vision *and* persistence.

During my lifetime we have come full circle on the matter of regionalism. I began my career in the immediate post-World War II era in the South. The South, as a result of its recognition of its need to improve research and developmental capabilities, and also to avoid costly duplication, established the Southern Regional Education Board. As the states of the South became relatively wealthier, the rate of duplication of expensive educational institutions and facilities mushroomed. By the time of the Great Society Period in the late sixties, regionalism seemed to me to be dead and only awaited suitable burial. The Southern Regional Education Board is certainly today a shadow of what it was in the late forties and early fifties when it was founded. The Southeastern Library Association, which started rejuvenating itself with such promise at my first conference in Atlanta in 1950, has suffered a similar fate.

At a President's Conference at the University of Illinois in 1961, I said people cooperate only when they're poor, to which the distinguished President of the University of Illinois, David Henry, reminded me (I was a mere Assistant Professor then) that "poor" was a relative term. (Illinois went on and did what everybody else did, they expanded into programs that they certainly had no business doing.) Now in 1990 we seem to have come back to regionalism as a possibility of doing together what we cannot do separately. I suggest to you that being relatively poor is what makes cooperation thrive. Cooperation and regionalism may be within the state, among the states, or among various professional entities. Regionalism is again perceived as a vehicle for doing well in the Information Age what it was supposed to have done earlier. In the words of one of my children, "What goes around, comes around."

In the meeting of discussion group reporters last

evening, there was strong agreement that we need to get our respective acts together—that citizens and decision-makers need to be better informed about the issues involving information and the importance of libraries as information centers for economic development. In this conference I found much support for solving this problem. What the reporters said last night, and what they reported this morning, was that we should take from this conference the ideas we have learned from each other. Several states are already planning similar conferences in their own states. Some are going to form strategic alliances with other groups. Others are planning an "information audit." But there was also strong support for SOLINET assuming a leadership role in working with the Southern Growth Policies Board, the Southern Governor's Conference, and other bodies which will help determine the routes we take on the telecommunications highway and the knowledge networks in the future.

Let me conclude by giving a very great tribute to this conference and the quality of the conference. Most of us attend conferences like this at which we, and other people, say the same thing over and over again. For me this was one conference that was different. Recently I picked up a paperback of Virgil's ***Aeneid*** in English translation. For the first time in forty years I am re-reading it, now in translation rather than in Latin as I did in high school. I was amazed again how marvelous Virgil's words are in that book and how many quotable quotes are in there. As I think of all of the conferences in which I have participated and in which I have spoken in the past, in the future I may very well say about this conference what "true-hearted Aeneas" said to encourage shipwrecked colleagues on the shores of Libya, "perhaps, someday, it will be pleasant to remember these things."

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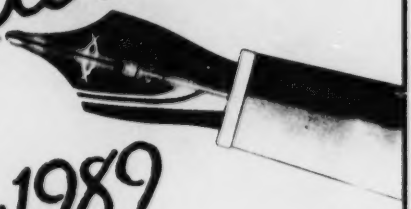

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ALABAMA

Database links jobs, applicants

The School of Library and Information Studies at the University of Alabama, in conjunction with the Alabama Library Association, has begun offering a job placement service. Resumes are matched with job descriptions to help professionals identify available positions at libraries and information centers.

The majority of the positions and applicants are in Alabama, but the database is not restricted geographically. There is no charge for listing a position or resume within the database. For a fee of $4.00, the database can be searched by job seekers or prospective employers.

Further information and entry forms are available from the School of Library and Information Studies, University of Alabama, Box 870252, Tuscaloosa, AL 35487-0252.

Alabama authors (l-r) Carol Middleton, Vicki Covington and Marilyn Barefield took part in the Birmingham Public Library's Author Fest.

FLORIDA

SEFLINK connects local systems

SEFLIN (Southeast Florida Library Information Network, Inc.) has announced completion of successful testing and operation of MSI's IRVING Network Systems software to link dissimilar local systems. The SEFLINK—IRVING application, running on DEC MicroVAX 3300's, is based on Colorado's IRVING technology, which uses a common user interface to allow users to search heterogeneous library catalogs.

Currently, SEFLINK links three stand-alone databases: Florida Center for Library Automation's IBM NOTIS-based system; Broward County Library's Tandem UTLAS T-50 system; and Miami-Dade Public Library's GEAC system. The application supports Bibliographic Search to over 8.5 million volumes in the network, Interlibrary Loan and Electronic Mail.

SEFLIN has also announced initiation of a second phase with MSI. Network connections will be provided to Palm Beach County Public Library's DRA system and the University of Miami's new turnkey system.

Fla. libraries win media awards

Brevard Community College Library, in Cocoa, and the Venice Area Libraries were among the winners in ALA's "Librarians in the Media" contest. The contest salutes libraries for "consistently obtaining high-quality coverage about librarians in non-library media." BCCL won first place in the television category, while Venice Area Libraries took first place for weekly newspaper coverage.

The Public Theatre of Greater Fort Lauderdale presented "The Living Book" at the Broward County Library Children's Reading Festival, Main Library, Fort Lauderdale, Fla.

GEORGIA

Georgian cited for service to print-handicapped

The 25th annual Francis Joseph Campbell Citation

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and Medal was awarded posthumously to former Georgia Regional Librarian James A. DeJarnatt in recognition of his notable contributions to library services for print-handicapped readers.

At the time of his death in 1987, DeJarnatt had been Georgia Regional Librarian for eleven years. He also worked for 13 years for the Library of Congress National Library Service for the Blind and Physically Handicapped Network. He was the first president and a founding board member of the Georgia Radio Reading Service, and was active in a number of professional organizations, including the Southern Conference of Librarians for the Blind and Physically Handicapped.

The awards committee cited DeJarnatt for "working with diligence, perseverance and energy to promote strong library service for print-handicapped readers." The announcement of DeJarnatt's selection took place at the annual ALA convention in June. A special ceremony commemorated the 25th anniversary of the award, presented annually to leaders in the field of library services and literacy for blind and visually impaired persons.

KENTUCKY

More than $1 million earmarked for networking

Recent public and private funding initiatives are giving Kentucky a jump start on statewide library and information networking. Governor Wallace Wilkinson and the 1990 General Assembly earmarked $950,000 over the next two years to help bring Kentucky Library Network member institutions up on a technology-based system, starting with OCLC group access. A $100,000 challenge grant from the Mary and Barry Bingham, Jr. Fund helped libraries gain this support, bringing the total monies to $1,050,000 through 1992.

The 1990 legislative session also brought about a $525,600 increase in state aid to public libraries, and a $525,000 appropriation for purchasing and refurbishing bookmobiles in Kentucky.

LOUISIANA

La. Literary Award winner announced

The Amphibians and Reptiles of Louisiana, by Harold A. Dundee and Douglas A. Rossman, received the 1989 Louisiana Literary Award, presented yearly by the Louisiana Library Association at its annual conference. Published by the Louisiana State University Press, the book is a detailed, comprehensive study of the state's widely varied herpetofauna. Dundee, emeritus professor of biology at Tulane University, describes the amphibians and turtles, while Rossman, adjunct professor of zoology and curator at LSU's Museum of Natural Science, describes snakes, lizards, and the American alligator.

Meanwhile, Eli N. Evans, 1988's prizewinner for his *Judah P. Benjamin: The Jewish Confederate*, has donated a copy of his book to each Louisiana parish (public) library, to enhance their collections of Louisiana history materials. Evans' book details the life of a prominent antebellum Louisiana statesman who became the first acknowledged Jew to be elected to the U.S. Senate.

MISSISSIPPI

Children's lit workshop held

Librarians from around the Gulf Coast area recently attended a two-day children's literature workshop at Jackson-George Regional Library. Leading the workshop was Coleen Salley, professor of library science at the University of New Orleans. According to Mary Ann Louviere, youth services coordinator at JGRL and organizer of the workshop, the program was designed to increase awareness of quality children's literature and help librarians develop confidence in selecting and presenting materials in storytime programs.

NORTH CAROLINA

NCSU wins Dana Award

Promotion of its Centennial celebration won the North Carolina State University Libraries a 1990 John Cotton Dana Library Public Relations Award.

The award, which recognizes outstanding achievement in the promotion of library services, was given to NCSU "for the year long celebration of the Centennial of the founding of the Library, innovatively integrating all fund-raising and publicity activities." The NCSU Libraries

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used photographs, text and videotape to document special activities, such as the Author of the Year program, a North Carolina writers lecture series and a book fair.

Competitions were held for students and faculty, and posters and T-shirts were sold throughout the year. The award citation takes special note of the "attractive new identifying logo and the enthusiastic involvement of the student body."

AASL honors Greensboro district

The Greensboro Public School District has been named winner of the American Association of School Librarians National School Library Media Program of the Year Award for excellence and innovation in school library media program services, large school district division.

"The school library media specialists in the district and their involvement in every facet of the program is one of its greatest strengths," said award committee chair Beverly J. Bagan. "The Greensboro Public Schools Library Media Program represents a large district which is meeting large challenges and working toward commendable goals."

SOUTH CAROLINA

Statewide preservation plan released

A statewide preservation plan for South Carolina has been published. *Hope for the Future*, a 35-page report, outlines recommendations for statewide action in the areas of building design and environmental control, disaster preparedness, storage and handling, preservation photocopying and microfilming, and conservation treatment.

The report calls for the coordination of statewide efforts through a Coordinating Council, comprised of the State Librarian, State Archivist, a representative of the Commission on Higher Education, and a representative of the Palmetto Archives, Libraries and Museum Council on Preservation (PALMCOP). PALMCOP prepared the report after a needs assessment and planning project, conducted with assistance from the Southeastern Library Network (SOLINET).

Copies of *Hope for the Future* are available free of charge from Patricia Morris, South Carolina Department of Archives and History, P.O. Box 11669, Columbia, SC 29211.

TENNESSEE

JOBLINC debuts in Memphis

A 35-foot long mobile unit began rolling on Memphis streets this spring, taking job information and opportunities to area citizens. The large blue-and-white vehicle is the cornerstone of the Memphis/Shelby County Public Library's new JOBLINC service, which will help people polish the skills needed to get a job.

The $86,000 rolling job center was paid for with a grant from the Shelby County government. An LSCA grant of $11,000 was used to develop JOBLINC's materials collection. Staff for JOBLINC comes from job and career specialists who work for the library's popular and widely-used LINC information and referral service.

Aboard the van are two computers, video viewers, a copier/telefax combination, filmstrip viewers, video cameras, telephones, and job-related information in books, magazines, newspapers, brochures, videocassettes and computer software. Supervisor Norma Gandy says the program's goal is to provide job seekers with all the tools they may need to find and get a job, including job readiness counseling, interview techniques, resume preparation, job listings, and information about training.

"This kind of assistance and information isn't new for the library," Gandy says, "but JOBLINC is a unique way of providing the service to the people who need it." Employers may take advantage of JOBLINC by listing job openings with the library.

JOBLINC's schedule will be flexible, allowing it to go wherever it is needed and operate during hours convenient to area residents.

Maryville College hosts "Practical Librarian" conference

"The Practical Librarian: Managing Collections and Services in the College Library" was the title of a conference held May 31-June 2 at Maryville College. Co-sponsored by Maryville's Lamar Memorial Library and the Graduate School of Library and Information Science, University of Tennessee, Knoxville, the conference offered ideas and information to college librarians serving student enrollments of under 2000. Major speakers were Tom Watson, formerly library director and now Vice-President for University Relations, University of the South, and Evan Farber, Earlham College.

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College librarians interested in hosting the Practical Librarian conference in 1991 should contact Dr. William C. Robinson, GSLIS, 804 Volunteer Blvd., University of Tennessee, Knoxville, TN 37996 (615-974-7918) or Joan Worley, Lamar Memorial Library, Maryville College, Maryville, TN 37801 (615-981-8257), coordinators of the conference.

VIRGINIA

New Va. union list largest ever on CD-ROM

The new compact disc version of CAVALIR, the union database for the Common Wealth of Virginia, is the largest public access catalog yet produced on CD, according to Brodart Automation. It covers 3.3 million unique titles, and is contained on five discs. By contrast, CAVALIR'S microfiche catalog contains over 10,000 fiche and weighs 52 pounds per copy.

This 11th edition of CAVALIR is being distributed to 220 libraries across Virginia. "CAVALIR is used primarily as an interlibrary loan tool, although some libraries use it for cataloging," said Ashby Wilson, director of the Virginia State Library's Automation and Networking Division. The CD-ROM version allows staff and patrons to limit searches by region or individual library code, a new feature.

WEST VIRGINIA

Libraries promote "College Scouts"

West Virginia's 178 public libraries will serve as contact points for the state's new plan to promote higher education among high school students.

The country's first such program, called "College Scouts," aims to encourage college attendance through education about the enrollment process and financial aid. "Scouts" are college graduates who volunteer to counsel high school students at their local public library. Librarians match scouts with students and provide information about financial aid at individual institutions.

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BULLETIN BOARD

Medical librarians to meet in November

The Southern Chapter of the Medical Library Association will hold its annual meeting November 2-6, 1990 in Atlanta. This year's theme will be "Arrivals and Departures: Making Connections for the 90's."

Topics for individual sessions include "Information Connections," "Journals: Whose Business Is It Anyway?" and "I Published and Didn't Perish." Chapter members will present papers in the areas of technical services, public services, hospital libraries, and library management.

The meeting will be held at the Omni Hotel at CNN Center. For further information, contact Carol Burns, Health Sciences Center Library, Emory University, 1462 Clifton Road, Atlanta, GA 30322. She can be reached by phone at (404) 727-5820.

Conference on binding planned

The Preservation of Library Materials Section of ALA's Association for Library Collections and Technical Services presents "New Directions in Library Binding," September 14-15, 1990 in Pittsburgh, Pa.

The program will teach attendees how to administer, evaluate and improve their operations to provide an effective, preservation-conscious binding program. Speakers will include Carolyn Morrow of the Library of Congress, Debra McKern of Emory University, Lisa Fox of SOLINET, and Ted Kuzen of the University of Virginia.

Registration fees are $200 for ALA/ALCTS personal members, $235 for ALA personal members, and $260 for nonmembers. For more information, contact Debra McKern, Emory University Libraries, Atlanta, GA 30322 (telephone 404-727-0306), or Yvonne McLean of ALCTS at 800-545-2433, x5032.

Kerr to speak at VEMA meeting

The Virginia Educational Media Association will hold its 1990 conference November 15-17 in Norfolk. Speakers will include famed YA author M.E. Kerr, who will conduct a workshop titled "Writing That Has Something to Say," as well as Dr. Marvin J. Cetron, known as one of the nation's foremost futurists.

N.C. school librarians meet

The North Carolina Association of School Librarians Work Conference will be held September 27-28, 1990 at the Holiday Inn Market Square in High Point, North Carolina. This year's theme is "1990 . . . Decade of Power . . . 2000." Speakers will include author Patricia MacLachlan, *School Library Media Quarterly* editors Barbara Stripling and Judy Pitts, and White House Conference participants Virginia Mathews and Eileen Cooke. For more information contact Nona Pryor, 336 NC 62 West, Randleman, NC 27317.

"Cataloging Heresy" papers sought

"Cataloging Heresy: Challenging the Standard Bibliographic Product" will be the theme of the Congress for Librarians to be held at St. John's University in Jamaica, New York on February 18, 1991. Papers are now being sought for inclusion in a volume to be published by Learned Information. Deadline for submission is December 15, 1990. For more information, contact Dr. Bella Hass Weinberg, Division of Library and Information Science, St. John's University, Jamaica, New York 11439.

Library Card Sign-Up Contest set

ALA and World Book, Inc. are sponsoring the Library Card Sign-Up Contest in conjunction with Library Card Sign-Up Month in September. Prizes will be awarded to libraries which demonstrate the largest increase in library card registration from September 1 to October 1, 1990, with first prize being a $1,000 gift certificate from World Book.

For an entry form, send request on a postcard to Library Sign-Up Contest, Public Information Office, ALA, 50 E. Huron Street, Chicago, IL 60611.

LIBRARY

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EBSCO studies journal prices

The total cost of a one-year subscription to all titles listed in *Index Medicus* has climbed 73% over the last five years, according to a new study just released by EBSCO Subscription Services.

In 1990, the 2,337 prepriced *Index Medicus* titles cost a total of $500,428.28, compared to just over $290,000 for 2,140 titles in 1986. Included in the study are all active titles in *Index Medicus*, excluding those which are published irregularly and those which are made available at no cost.

The study was researched by EBSCO Biomedical Division Marketing Manager Lynn Fortney, in conjunction with Victor A. Basile of the University of Medicine and Dentistry of New Jersey. Plans call for the study to be repeated annually.

To request a copy of the Price Study, write to Lynn Fortney, EBSCO Subscription Services, P.O. Box 1943, Birmingham, AL 35201, or contact the EBSCO Regional Office serving your area.

Video helps choose videos

"Choosing the Best in Children's Video," a 35-minute video for parents and caregivers, is now available from ALA.

Hosted by actor Christopher Reeve, the program includes interviews with children's video experts, as well as clips from more than 30 acclaimed videos. Among the experts who appear are Peggy Charren of Action for Children's Television, and children's librarians Susan Pine and Steve DelVecchio of the New York Public Library.

The video emphasizes libraries as a primary source for quality videos, and librarians as experts willing to help parents make selections.

Available in VHS or ¾ inch format, the video is available for $24.95 from ALA Graphics, 50 E. Huron Street, Chicago, IL 60611. To order by phone, call 1-800-545-2433.

Library instruction guide published

THE LIRT Library Instruction Handbook, edited by May Brottman and Mary Loe, is a handbook and training manual for librarians in all types of libraries who want to develop library instruction programs. It was prepared by experienced bibliographic instruction librarians and supplemented by an editorial board of more than 40 LIRT members. The content is based on a thorough literature review and a nationwide survey of public, school, academic and special librarians.

The book is available for $23.50 from Libraries Unlimited (ISBN 0-87287-664-0).

New "Read" posters available

Three new posters have been added to ALA's popular series of "Read" posters, depicting celebrities reading their favorite books. Pictured on the newest posters are actors Glenn Close and Kirk Cameron, and athlete Bo Jackson.

The posters may be ordered individually, at a cost of $5.00, or a kit containing all three is available for $12.00. To order, call 1-800-545-2433, or write to ALA Graphics, 50 E. Huron Street, Chicago, IL 60611.

New book locates black history sources in Virginia

Afro-American Sources in Virginia: A Guide to Manuscripts, by Michael Plunkett, is now available from the University Press of Virginia.

Based on a survey of resources in Virginia repositories, the book annotates and indexes those manuscripts throughout the state that provide information on the lives of Afro-American men and women during the periods of slavery, emancipation and civil rights. Documents examined include plantation records, black and white church records, Bible Records, diaries and travel journals of the South, photographs, medical records, and state and governmental records. The author is Curator of Manuscripts at the University of Virginia Library.

To order, contact the University Press of Virginia, Box 3608 University Station, Charlottesville, VA 22903-0608.

Children's Book Council lists outstanding science books

The Children's Book Council (CBC) is offering a free reprint of the list "Outstanding Science Trade Books for Children in 1989," a joint project of CBC and the National Science Teachers Association. The list appears annually in the NSTA journal *Science and Children*.

The 1989 list contains 100 books written primarily for children in pre-kindergarten to 8th grade, chosen by science educators and librarians for their accuracy, readability, and quality of format/illustrations.

To receive a copy of the list, send a stamped (65¢), self-addressed 6 x 9 envelope to CBC, 568 Broadway, Suite 404, New York, NY 10012.

Guide aids genealogical researchers in Britain

A Guide to Genealogical Resources in the British Isles, by Dolores Owen, is now available from Scarecrow Press.

Owen's guide lists record offices and libraries in the British Isles alphabetically by town, covering those with collections of interest to genealogists and to family and local historians. Listings include address, telephone number, access to records, duplicating capabilities, services offered, publications, an account of the holdings, and conditions for admission. Appendices provide an alphabetical list of the institutions, genealogical associations and societies, and maps.

The author is the retired head of the Documents Department at the University of Southwestern Louisiana. Her previous publications include *Abstracts and Indexes in Science and Technology: A Descriptive Guide* and *Directory of Associations in Louisiana*. She is currently preparing a new edition of the latter work.

KEEPING UP

ALABAMA LIBRARIAN
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The Document Preservation Imperative in Tennessee: Part II-Preservation Activities in the Tennessee State Library and Archives, by Edwin S. Gleaves, p. 26

PEOPLE

Dan Amsberry has joined the Hillsborough Community College Library as District Library Technical Services Librarian. ☐ **Joan Atkinson,** Associate Professor at the University of Alabama School of Library and Information Studies, has received the Outstanding Commitment to Teaching award from the National Alumni Association. Mrs. Atkinson, a past president of ALA's Young Adult Services Division, has been on the faculty since 1972. ☐ **Gayle Baker** has been named Assistant Professor and Reference Services Coordinator, Science and Technology for the University of Tennessee, Knoxville Libraries. ☐ **Audrey Bankston** is now Reference Librarian, Microforms Department, at the Georgia Tech Library. ☐ **Dalarna Breetz** is now Public Library Development Branch Manager at the Kentucky Department for Libraries and Archives. ☐ **Marilyn S. Burke** has joined the State University System of Florida Extension Library as Associate University Librarian. ☐ **Sharon H. Byrd** is now Automation Librarian and Assistant Head of Reference at Davidson College. ☐ **Chris Casper** has been named Visiting Instructor Librarian at Florida State University's Strozier Library. ☐ **Dr. Ronald Doctor** joins the faculty of the University of Alabama School of Library and Information Studies August 16, as Associate Professor in the area of information studies. ☐ **Janet Dodd** is now a cataloger in the Serials Catalog Department at the Georgia Tech Library. ☐ **Pat Farris** is the new Audiovisual Librarian in the Loans Section at the State Library of Florida. ☐ **Kebede Gessesse** has been appointed Science and Engineering Librarian at the University of Alabama Libraries. ☐ **Vicki Clark Hamaker** has been appointed Visiting Instructor Librarian at the University of Central Florida. ☐ **Richard H. Harrison II** has been named General Reference Librarian at the University of Alabama, Birmingham's Sterne Library. ☐ **Douglas Hasty** has been appointed Interlibrary Loan Librarian at Florida International University. ☐ **Dr. Joe A. Hewitt,** associate university librarian for technical services at the University of North Carolina, received the 1989 Best of LRTS Award for his article, "On the Nature of Acquisitions," published in *Library Resources & Technical Services.* This paper also won the 1990 Blackwell/North America Scholarship Award, which provides a $1,000 scholarship to be given to the library school of Dr. Hewitt's choice. ☐ **Lee Ketcham** has been promoted to Director of Account Services at EBSCO's Birmingham Regional Office. ☐ **Edith Knepper,** former Head of Reference at the University of South Florida, Tampa Campus, has retired after 15 years of service. ☐ **JoAnn Lahmon** is now Instructor and Cooperative Information Services Librarian at the University of Tennessee, Knoxville Libraries. ☐ **Sherry Laughlin,** formerly Government Documents Librarian at the University of Southern Mississippi, is now Head of Reference. ☐ **Tamara Lee** has been named Head of the Veterinary Medical Library at Auburn University. ☐ North Carolina State Librarian **Howard McGinn** has been named to the Library of Congress' Networking Advisory Committee. ☐ **Jonathan McKeown** has joined the Cobb County (GA) Public Library, as Librarian of the Acworth branch. ☐ **Dr. Martha Merrill,** professor of instructional media at Jacksonville State University in Jacksonville, Ala. has been elected president of the Alabama Library Association for 1990-91. Dr. Merrill is the immediate past President of the Alabama Association of College and Research Libraries chapter, secretary of ALA's Intellectual Freedom Round Table, and a member of the IFRT Executive Board. She also served as chair of the Intellectual Freedom Committee of SELA from 1986-1988, and as chair of the Alabama Library Association's Intellectual Freedom Committee from 1985-1989. ☐ **James O. Minton** has been appointed Assistant Professor and Map Librarian at the University of Tennessee, Knoxville Libraries. ☐ **Kim Montgomery** is the new LINE Librarian at the University of Central Florida. LINE (Library and Information Network and Exchange) is the library's fee-based information service. ☐ **Samuel F. Morrison** is now Director of the Broward County Libraries Division, in Fort Lauderdale, Florida. He was previously First Deputy Commissioner and Chief Librarian at the Chicago Public Library, and also served as Deputy Director of Broward County's Libraries Division from 1976 to 1987. ☐ **Ruth O'Donnell** has joined the State Library of Florida's Bureau of Library Development as an Institution and Special Clientele Consultant. ☐ **Mary-Frances Panettiere** has been named Assistant Head of the Microforms Department at the Georgia Tech Library. ☐ **Lorena W. Pennington** has been named Chief Librarian at the Madisonville (TN) Library. ☐ **Madeleine Perez** has been appointed Archivist/Manuscript Cataloger at Duke University. ☐ **Diane E. Perushek** has been named Associate Professor and Associate Dean for Collection Development and Management at the University of Tennessee, Knoxville Libraries. ☐ **Sarah Phillips** is now Head of Reference at the University of North Florida. ☐ **Michael Phillips** has been appointed Reference Librarian at Robert Scott Small Library, College of Charleston (SC). ☐ **Lee**

PEOPLE

Pike, Business Librarian at the University of Alabama, received the 1990 Distinguished Service Award from the Alabama Library Association. He is credited with a major role in implementing the Alabama Union List of Serials. ☐ **Dr. Gary R. Purcell,** director of the Graduate School of Library and Information Science, University of Tennessee, Knoxville, since 1988, has now returned to full-time teaching. Glenn E. Estes, professor and assistant director, will serve as acting director through July 1991. ☐ **John Rivest** is a Visiting Associate University Librarian in Cataloging at Florida State University. ☐ **Nancy Rogers**, Vice-President and General Manager of the Southeastern Regional Office of EBSCO Subscription Services, resigned in May. She has been in the library field since 1966, when she began her career as a bookmobile librarian in Birmingham, Alabama. She leaves EBSCO after 12 years in order to travel and enjoy the company of her husband. Ms. Rogers plans to attend the SELA conference in Nashville later this year, as an SELA member and participant. ☐ **Jane S. Row** is now Assistant Professor and Reference Services Coordinator, Social Sciences at the University of Tennessee, Knoxville Libraries. ☐ **Jill Shannon** is now Special Collections Cataloger at the University of Alabama Libraries. ☐ **Caroline L. Shepard** is now Youth Services Consultant at the North Carolina State Library. ☐ **Dr. Paul Spence,** Collection Development Librarian at the University of Alabama, Birmingham, received the Alabama Library Association's Exceptional Service Award at the Association's annual convention in April. Dr. Spence's accomplishments include his efforts toward developing UAB's Mervyn H. Sterne Library into a major research facility, and implementing the Network of Alabama Academic Libraries. He also serves on the faculty of the School of Library and Information Studies at the University of Alabama. ☐ **Bernadette Storck,** formerly manager of Community Resource Center for the Tampa-Hillsborough County (FL) Public Library System, is now Administrator of the Pinellas Public Library Cooperative. The new cooperative is designed to bring together library services for the 20 plus cities and the unincorporated areas of Pinellas County. Target date for implementation is October 1. ☐ **Mark A. Thomas** is the new Director of the Johnson City (TN) Public Library. He was previously Associate Director of the Arapahoe Library District in Colorado. ☐ **Janet Thomas** is a new cataloger at Florida Southern College. ☐ **Alphonse F. Trezza,** professor in the SLIS program at Florida State University, is this year's recipient of ALA's Joseph W. Lippincott Award, for notable achievement in the field of librarianship. Mr. Trezza, a member of the FSU faculty since 1982, has also served as Director of the Illinois State Library and Executive Director of NCLIS. ☐ **Karen Unguralt** is the new Associate University Librarian in Documents at the Florida State University Library. ☐ **Kay Wall,** formerly Reference Librarian at the University of Southern Mississippi, has been named Director of Public Service. ☐ **Elaine Winske** has been named Government Documents Librarian at Florida International University, North Miami Campus. ☐ **Kelly Sink Wood** has been promoted to Head of Cataloguing at Davidson College. ☐ **Diana Young** is now editor of *Tarheel Libraries*, the newsletter published by the North Carolina State Library. She has been a member of the State Library staff since 1975, and currently serves as Director of Network Operations and Special Projects. ☐ **Janet E. Young** has been appointed Reference Librarian for Science and Engineering at the University of Alabama, Birmingham's Sterne Library.

PEOPLE

DEATHS

Martha Bailey, librarian at Staunton River Annex in Bedford County, Virginia, died last spring. She had previously served as Regional Director for the Roanoke Region, and was active in the Virginia Educational Media Association. ☐ **Anthony Benoit,** director of the Jefferson Parish (La.) Library, died March 30, 1990. A graduate of Louisiana State University, he was previously employed as Louisiana State Penitentiary librarian, Morehouse Parish Library director, and as public library consultant for the State Library of Louisiana. Active professionally, he held various LLA offices including the presidency and served as Louisiana representative to SELA. In 1987, he received the LLA New Members Round Table Mid-Career Award.

Helen Hagan, librarian at UNC-Wilmington from 1963 to 1973 and a former library science faculty member at Emory University, died in March. ☐ **Carolyn Gregg Palmer**, media specialist at East Mecklenburg High School in Charlotte, N.C. and an adjunct faculty member at Winthrop College, died February 16, 1990. She had recently been named Media Coordinator of the Year by the North Carolina Association of School Librarians.

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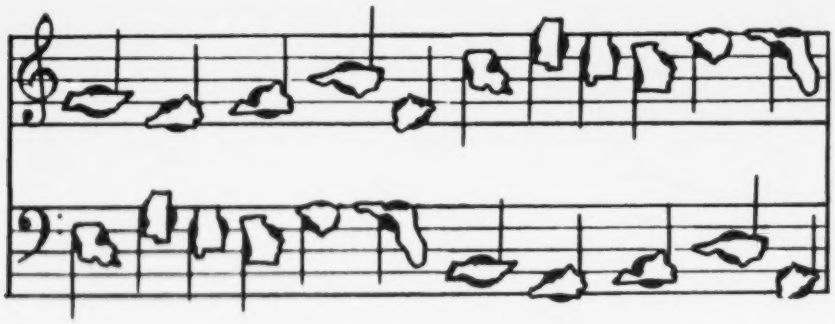
Southern Harmony: Libraries in Tune for the Future

James E. Ward



For the past several months librarians in Nashville and throughout Tennessee have been working hard in anticipation of the Southeastern Library Association/Tennessee Library Association joint conference, scheduled for December 4-8, 1990, in Nashville at the incomparable Opryland Hotel. Truly one of the most magnificent hotels in the country, Opryland Hotel has 1,891 rooms, including 120 suites and more than 500 Garden Terrace rooms which overlook the tropical Cascades covered by a 2½ acre skylight or the Conservatory—a two-acre Victorian garden under glass.

Numerous restaurants in the hotel cater to a variety of tastes and moods, and a panorama of shops can be found to meet your every need. The sportsminded will enjoy tennis, swimming, a fitness center, and, beginning in the fall of 1990, an 18-hole championship golf course.

In keeping with the season, a popular tradition at Opryland Hotel in December is the celebration of "A Country Christmas." The entire hotel complex is transformed into a Winter Wonderland, and visitors can enjoy the beauty and excitement of the event, including colorful Christmas scenes and decorations; a Christmas Craft, Art, and Antique Fair; nightly presentations of the "Country Christmas Feast and Musical Revue"; Christmas stories told by country music celebrities and others; holiday dinners from seven different countries prepared by Old Hickory Restaurant's award-winning chef; and an opportunity to blend their voices with community choirs and hundreds of guests who gather on the balconies to sing Christmas carols in the breathtaking Victorian Conservatory.

Four preconferences are scheduled, including a 1½ day institute by the Library Administration and Management Association (LAMA) of ALA on the topic "Understanding and Relating to Your Community's Power Structure." Scheduled for December 4-5, this institute will feature Virginia Mathews and Robert B. Croneberger. Three half-day preconferences are planned on Wednesday, December 5: (1) "The Dollars and Cents of Interlibrary Loan: A Methodology for Determining Costs," by Virginia Boucher; (2) "Accentuate the Positive, Eliminate the Negative: Don't Mess Around with Accreditation," and (3) "Computer-Assisted Instruction: A Sampler."

At the opening general meeting on Wednesday, December 5, attendees will hear Linda Crismond, newly-appointed Executive Director of ALA. A special feature at the opening meeting will be a performance by the world-famous Fisk Jubilee Singers.

On Thursday, December 6, the Second General Meeting (Luncheon) will combine the presentation of SELA and TLA Awards and a talk by Wilma Dykeman, Tennessee state historian and author of numerous books, the latest being a biography of Sequoyah, which hopefully will be published by conference time.

Last, but certainly not least, on Saturday morning, December 8, at the closing general meeting, we will have an opportunity to hear Tom T. Hall, musician and songwriter, author and raconteur, philanthropist, civic leader, and wit.

The various substructures of SELA and TLA have joined in planning more than thirty individual programs on a wide variety of topics. Space will not permit a complete listing, but to whet your appetite, a few examples of what's on the program menu include (1) a Special Libraries meeting and tour of the Country Music Hall of Fame Museum and the Country Music Foundation Library and Media Center; (2) a WHCLIST-sponsored discussion of Region II recommendations for the 2nd White House Conference on Libraries and Information Services, as well as a preview of WHCLIS; (3) a program on "Mounting External Databases on Library Online

Dr. James E. Ward, Director, Crisman Memorial Library, David Lipscomb University, Nashville, Tennessee is SELA Vice-President/President-Elect.

Catalogs"; (4) a Public Libraries program entitled "Getting Your Piece of the Pie: Innovative Advocacy and Fund Raising Ideas"; (5) "Information Literacy," sponsored by the SELA/TLA Library Instruction Round Tables and featuring Patricia S. Breivik, chair of ALA's Presidential Commission on Information Literacy; (6) a Library Education Section program on "Accredited Library Education via Telecommunications"; (7) "The State of Telefacsimile in Southeastern Libraries," one of eight programs planned by the SELA Interstate Cooperation Committee and the TLA Resource Sharing Round Table; (8) a presentation at the Intellectual Freedom Committee meeting by Gene Lanier on the topic "Confidentiality of Library Records . . . "; (9) "A Visit with Robert Newton Peck," planned by the Volunteer State Book Award Committee and others; and (10) several programs planned for school librarians, including two by Patricia McKissack.

Since ALA has designated 1990 as the "Year of the Trustee," the conference is placing emphasis on trustees and friends of libraries, and a special invitation is extended to them to attend. Another major emphasis at the conference is literacy, since UNESCO has proclaimed 1990 as "International Literacy Year." Many programs are focusing on that topic.

At the time of this writing it looks almost certain that all exhibit space will be sold out, and many special activities are planned for the exhibit area, such as autograph sessions with celebrities and perhaps a little "entertainment" thrown in.

By the time this journal is delivered, SELA and TLA members should have received preregistration materials, including information on program, housing, special airfare, and other relevant items. Persons not receiving these materials may contact Claudia Medori at SELA, P.O. Box 987, Tucker, GA 30085-0987 [Telephone: (404) 939-5080].

Tennesseans are ready to welcome you to Music City, U.S.A., so make plans to join us in the fun and what we hope will be a meaningful conference.

Southern Harmony

Libraries in Tune for the Future

SELA/TLA Conference
Opryland Hotel
Nashville, Tennessee
December 4-8, 1990

WHAT IS POWER? WHO HAS IT? HOW DO YOU GET IT AND KEEP IT?

Announcing

Understanding and Relating to Your Community's Power Structure

A LAMA Regional Institute
presented as a Preconference to the
1990 Southeastern Library Association/Tennessee Library Association Conference
December 4 and 5, 1990
The Opryland Hotel, Nashville, Tennessee

Presenters: Virginia H. Mathews and Robert B. Croneberger

For more information contact Liz Miller, LAMA, 50 E. Huron Street, Chicago IL 60611
phone 1-800-545-2433, ext. 5038 or (312) 280-5038.

SPOTLIGHT ON PR — SELA 1990

Members of SELA are invited to participate in competition for awards which will be presented for 1988-89 print media in five categories:

- Annual Reports
- Newsletters
- Fliers/brochures
- Calendars of Events
- Bookmarks/bibliographies

This competition is sponsored by the Public Relations Committee of the Southeastern Library Association. Send five copies of each entry to Mary Munroe, Georgia State University, 100 Decatur St., Atlanta, GA 30303

Entries must be received by November 1, 1990.

Winners will be announced at the 1990 Biennium in Nashville.

Things to See and Do in Nashville

Pam Reese

Nashville, Tennessee is a city of 530,000 with a rich cultural and historical heritage. Nestled in the Middle Tennessee hills on the banks of the Cumberland River, Nashville was founded in 1779 by a group of pioneers who built a stockade on the banks of the river and named it Fort Nashborough, after Revolutionary War hero General Francis Nash. Nicknamed the "Athens of the South," Nashville is home to sixteen institutions of higher learning and a large printing and publishing industry. Other major economic factors include the State of Tennessee, aerospace and automotive industries, the commercial transport business, the music industry—and, of course, tourism. Winters in Nashville are moderate, with December temperatures averaging between 31-50 degrees. (Snowfall is unusual, but not unheard of, in December.) Below is a brief review of some of Nashville's wonderful sights and sounds. Grab your coat and come explore!

Downtown

Nashville's downtown area is home to a rich variety of cityscapes—from the stone and glass facades of postmodern skyscrapers to the log stockades of the reconstructed **Fort Nashborough** (1st Ave.) on the banks of the Cumberland. The **Tennessee State Capitol** (Charlotte Ave.), designed by architect William Strickland in 1844-45, overlooks the terraces of **Legislative Plaza,** built above the underground offices and committee rooms of the state's legislators. The **Tennessee Performing Arts Center** (Deaderick St.), which overlooks the Plaza, houses three performance theaters and has a full and varied schedule of events, from Broadway shows to rock concerts to experimental theater. TPAC also houses the **Tennessee State Museum** which is free and open to the public. Other buildings designed by Strickland include **St. Mary's Catholic Church** (5th Ave. N.) and the **Downtown Presbyterian Church** (Church Street), a fully-restored Egyptian Revival building with tromp l'oueil wall panels and papyrus-motif stained glass. In the Capitol Hill area you'll find the **Tennessee State Library and Archives** (7th Ave. N.); and a few blocks away the **Ben West (central) Library** of the Nashville/Davidson County Public Library system (Polk St.). Adjoining the Stouffer Hotel/Nashville Convention Center is downtown Nashville's newest attraction—**Church Street Center** (Church Street), a shopping and dining mall with a magnificent view up Capitol Boulevard. Eateries at Church Street Center include *Nine Point Mesa* (Mexican), *Miss Daisy's Uptown* (Nouvelle), *Cobblestones* (Mixed Bag), and the *Bristol Grille* (Nouvelle), all medium-priced ($7-$15 dinner), sit-down establishments. The mall also has a good court for fast meals. No trip downtown is complete without a drive past, or perhaps a tour of, the **Ryman Auditorium** (5th Avenue N.), the original of the Grand Ole Opry, or a peep down **Printer's Alley** (between Church St. and Commerce), where the nightlife is definitely lively. Down by the river, **Historic Second Avenue**, a revitalized 3-block stretch of Victorian and Italianate warehouse and commercial buildings is definitely worth a trip. Second Avenue is home to interesting boutiques, bookstores, architectural antique stores, art galleries, and restaurants. The *Old Time Spaghetti Factory* (inexpensive and fun), *Mere Bulles* (moderately expensive, elegant continental), and *Laurel's Raw Bar* (medium price, seafood) are among the restaurant offerings on Second. *Rare, Foreign & More*, an interesting new and collector's bookshop and newsstand, also houses a splendid dessert cafe with a counter full of irresistibles. Other favorite dining establishments in the downtown area include the historic *Hermitage Hotel* on 7th Avenue N. and *Merchant's* on Broadway. Both are moderately expensive and offer elegant continental dining.

West End Area

One simply can't visit Nashville without visiting the **Parthenon**. Located in **Centennial Park** (West End), the structure was originally a temporary replica built to celebrate the city's centennial (a little late) in 1897. It proved so popular that the city built a permanent rendition in 1931. The Parthenon houses a recently renovated art gallery, and provides shelter for a 42-foot statue of Athena, completed this year. The West End Avenue/Vanderbilt area is host to a wide variety of restaurants and shops. Among the eating establishments are *Chile's, O'Charley's, Houston's, the L&N Seafood Grille, 32nd Avenue, Faison's, Granite Falls,* the *Rio Bravo Cantina,* and the *Cakewalk Cafe*. All are medium to moderate in price.

Belle Meade Area

A drive out West End Avenue (which becomes Harding Road) yields a variety of historic sights and activities. **Belle Meade Mansion** (Harding Road), the plantation home of the Harding family, was built around 1840 and became one of the South's largest thoroughbred stud farms. The mansion is open to the public. Belle Meade Boulevard leads directly to the entrance of **Percy Warner Park** and its adjoining twin, **Edwin Warner Park**. These two forest parks comprise 2,664 acres of public wooded sanctuary, and boast miles and miles of auto loops, hiking trails, and bridle paths. A true taste of middle Tennessee woodlands can be experienced by

Pam Reese is Public Relations Director, Public Library of Nashville and Davidson County, Nashville, TN 37203.

making the loop through Percy Warner Park. Nestled in the hills adjoining the park is the **Cheekwood Fine Arts Center and Tennessee Botanical Gardens** (Cheek Rd.). The Cheek Mansion is a regal marvel of imported architectural elements. Ballrooms overlook a series of terraced lawns and formal gardens. The Mansion houses a permanent collection of paintings and art objects, and is host to an array of visiting exhibitions. Botanic Hall and surrounding greenhouses are a pleasure for the winter visitor, and the scenery of the grounds is spectacular year-round. During December, The Trees of Christmas, a charming display of thematically decorated trees, is Botanic Hall's traditionally-featured exhibit. *The Pineapple Room* at Cheekwood, open for lunch (reservations recommended), is a pleasant spot to enjoy a light meal.

Music Row

The 16th, 17th, and 18th Avenue area, bounded on the North by Division Street and on the South by Wedgewood, comprise the area known as **Music Row.** The restored and remodelled homes and buildings in this area house the record and music companies, talent agencies, and recording studios that drive the country music industry in Nashville. The **Country Music Hall of Fame and Museum** (Music Square West [17th Avenue]), managed by the Country Music Foundation, features exhibits covering over sixty years of country music history. The Foundation also operates RCA's **Studio B** at the museum, along with a fine research library and recording archives on the premises. Numerous independent shops and museums also thrive in the Music Row area. Bus tours of music industry sites and homes of the stars can be arranged at a number of these. Numerous music clubs around town feature bluegrass, country, jazz, fusion, and new age music. (Listings appear regularly in the local newspapers.) **Grand Ole Opry** tickets should be arranged for in advance. Call 615-889-3060 for ticket information.

The Hermitage

The Hermitage, home of President Andrew Jackson, is located off Old Hickory Boulevard (take I-40 East) in Northeast Davidson County. The home was begun in 1819, and was enlarged and remodelled a number of times by Jackson. The home has been carefully researched and restored, with original furnishings and personal belongings of the seventh President. Also on the grounds are two original log cabins, smokehouse, kitchen, and a formal garden designed for Rachel Jackson. The new Andrew Jackson Center at the Hermitage houses an orientation theater, museum, gift shop, and restaurant.

GRAND OLE OPRY TICKETS

SELA/TLA Conference—Nashville, TN
December 4-8, 1990

Since its first broadcast over Radio Station WSM-AM in 1925, America has been listening to the Grand Ole Opry and the best of country music entertainment. While in Nashville for the SELA/TLA Conference in December, come and be a part of an American tradition—the Grand Ole Opry. Being a part of the Opry audience in the world's largest broadcasting studio is an experience filled with fun, music, and magic. Come and see what helped to put the "music" in Music City, U.S.A.

Only six hundred tickets have been reserved for the 7:30 p.m. show on Friday, December 7, 1990, so order early. **Advance payment is required.** Pick up tickets at the SELA/TLA Conference registration desk upon arrival. Tickets will **not** be available for purchase at the conference.

COME TO TENNESSEE.
WE'RE PLAYING YOUR SONG—
AT THE GRAND OLE OPRY!.

Please reserve _____ tickets @ $14.00 each for the 7:30 p.m. Grand Ole Opry show on Friday, December 7, 1990.

Name _____

Address _____

City _____

State _____ Zip _____

Telephone (_____) _____

Person(s) with whom you wish to be seated: _____

_____

Make check or money order (**no cash**) payable to **SELA** and mail to:

James E. Ward
Box 4146
David Lipscomb University
Nashville, TN 37204-3951
Telephone: (615) 269-1000, Extension 2283

(Do not send with conference preregistration fees.)

SPECIAL AIRFARE TO SELA/TLA CONFERENCE

Sailair Travel, Inc., of Nashville, Tennessee, has been designated official travel agency for the Southeastern Library Association/Tennessee Library Association Joint Conference to be held in Nashville on December 4-8, 1990. Special airfares are available for travel to the conference at a substantial discount off the regular airfare. These special discounts are available for travel from December 1 through December 11, 1990.

For reservations and information, please call SAILAIR TRAVEL at 1-800-759-5800 (Monday-Friday, 8:30 a.m.-5:30 p.m. Central Time), and ask for the Group Department. Sailair Travel guarantees the lowest available, applicable fare on any airline. You will also receive $100,000 in flight insurance for each ticket purchased from Sailair at no additional cost. Those purchasing tickets from Sailair will be entered in a drawing to be held at the close of the meeting for 4 Tennessee country hams.

NOMINATIONS
SELA SECTIONS AND ROUNDTABLES 1990-1992

Public Libraries Section

Vice-President Elect	Ms. Donna Schremser Huntsville Public Library Beverly Bury, Director Roanoke City Public Library
Secretary	Elizabeth Bingham Head Adult and Circulation Services East Baton Rouge Parish Library Tom Moore, Director Wake County Library-Raleigh

Reference and Adult Services Section

Chair Elect	Trudy S. Jaques, Assistant Director East Baton Rouge Parish Library Baton Rouge, LA
Vice-Chair/Chair Elect	Carol Jones, Reference Department Pullen Library Georgia State University Atlanta, GA
Secretary	Nell A. Congdon, Head of Reference New Orleans Public Library Metairie, LA

Special Libraries Section

Chair Elect	Anthony R. Dees Atlanta, GA
Secretary/Treasurer	Anita Oser Cullowhee, NC

University and Colleges Libraries Section

Vice-chair/Chair Elect	Jennie S. Boyarski Paducah Community College Paducah, KY
Secretary	Betty D. Johnson DuPont-Ball Library Stetson University DeLand, FL

Government Documents Round Table (GODORT)

Chair	Maureen Harris, Documents Librarian Clemson University Clemson, SC
Vice-chair/Chair Elect	Eric Wedig, Documents Librarian Tulane University Library New Orleans, LA
Secretary	Gail Christian, Reference/Documents Librarian Pullen Library Georgia State University Atlanta, GA

Junior Members Round Table

Chair	David Tucker, Reference Librarian Sue Kellog Library Stone Mountain, GA
Secretary	Ellen Knowles, Children's Librarian Avis Williams Library Atlanta, GA

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CAUTION! BOOKS AT WORK

Banned Books Week: Celebrating the Freedom to Read
September 22-29,1990

REUTERS/BETTMAN NEWSPHOTOS

Books at work: the way equality is presented in these titles is offensive to some people

- *Bury My Heart at Wounded Knee* by Dee Brown
- *The Rabbit's Wedding* by Garth Williams
- *The Adventures of Huckleberry Finn* by Mark Twain
- *Color Purple* by Alice Walker
- *I Know Why the Caged Bird Sings* by Maya Angelou
- *Jubilee* by Margaret Walker
- *Slaughterhouse Five* by Kurt Vonnegut, Jr.
- *Tell Me How Long the Train's Been Gone* by James Baldwin
- *To Kill a Mockingbird* by Harper Lee

SOUTHEASTERN LIBRARY ASSOCIATION

Financial Report

January 1, 1989 — March 31, 1990

		1989 Budget	1990 Budget	Total Budgeted	Actual 1989	Actual 1/1-3/31/90
INCOME						
Conference, 1988		$28,534	0	28,534	28,534.76	0
Interest		3,000	2,500	5,500	1,112.05	98.17
Leadership Workshop		5,000	0	5,000	4,453.50	0
Membership		27,000	27,000	54,000	21,523.50	24,632.00
Presidents' Workshop		0	1,000	1,000	0	946.50
Southeastern Librarian		14,000	14,000	28,000	12,184.61	3,223.81
Southern Books		550	550	1,100	450.00	0
Miscellaneous		750	750	1,500	438.57	60.31
Workshops		4,000	4,000	8,000	0	0
Publications		0	0	0	159.00	2.00
Transfer from CDs		1,466	7,453	8,919	10,000.00	2,800.00
TOTAL INCOME		84,300	57,253	141,553	78,855.99	31,762.79
EXPENDITURES						
HEADQUARTERS						
Executive Secretary		7,155	7,585	14,740	7,154.88	1,896.24
Office Manager		19,080	20,225	39,305	19,369.76	5,050.52
Clerical (Temporary)		250	250	500	0	0
FICA		1,968	2,086	4,054	2,082.88	531.90
Office Rent		4,625	4,625	9,250	4,554.00	1,138.50
Bookkeeping		350	350	700	347.65	87.60
Travel		500	500	1,000	0	86.85
Printing		125	125	250	150.11	46.06
Postage		1,200	1,200	2,400	589.25	242.45
Telephone		1,100	1,100	2,200	1,069.90	288.62
Supplies		750	750	1,500	543.89	235.80
Equipment Service		1,550	1,550	3,100	204.75	0
Furniture/Equipment		7,300	300	7,600	6	4,645.72
Miscellaneous		50	50	100	0	26.43
SECTIONS/ROUNDTABLES						
Library Education Section		0	100	100	0	0
Public Libraries Section		0	100	100	0	0
Ref. and Adult Serv. Section		0	100	100	0	0
Res. and Techn. Serv. Section		0	100	100	0	0
Sch. and Child Lib. Section		0	100	100	0	0
Special Libraries Section		0	100	100	0	0
Trustees and Friends Section		0	100	100	0	0
Univ. and Coll. Section		0	100	100	0	0
Workshops		500	500	1,000	0	0
Govt. Doc. Round Table		0	100	100	0	0
Junior Members Round Table		0	100	100	0	0
Lib. Instr. Round Table		0	100	100	0	0
Online Search Libns.		0	100	100	0	0
COMMITTEES						
Award, Author		0	1,100	1,100	0	0
Award, President		0	50	50	0	0
Award, Program		0	50	50	0	0
Award, Rothrock		0	0	0	11.87	0
Conference Site		325	325	650	0	0
Conference, 1990		0	1,000	1,000	0	2,800.00
Handbook		0	1,000	1,000	345.60	0
Honorary Membership		0	200	200	22.97	0
Membership		2,000	1,000	3,000	2,379.84	95.97
Southern Books		1,500	1,500	3,000	708.94	0
Miscellaneous		250	250	500	0	0
SOUTHEASTERN LIBRARIAN						
Printing and Postage		12,500	12,500	25,000	19,705.43	4,499.77
Honorarium to Editor		1,000	1,000	2,000	750.00	250.00
EXECUTIVE BOARD						
Leadership Workshop		3,000	0	3,000	4,491.85	0
Presidents' Workshop		0	800	800	0	859.86
President		1,350	1,350	2,700	1,517.87	0
GENERAL ORGANIZATION						
Ad Valorem Tax		250	250	500	91.80	0
Audit and Tax Preparation		400	400	800	100.00	0
Bank Charges		50	50	100	63.08	4.06
Blanket Bond		324	324	648	324.00	0
Corporate Tax		13	13	26	0	0
Dues		75	75	150	25.00	50.00
Insurance		350	350	700	352.00	0
Retirement, Off. Mgr.		2,090	2,090	4,180	2,090.00	522.50
Miscellaneous		750	750	1,500	182.80	15.00
TOTAL EXPENDITURES		72,730	68,823	141,553	69,250.12	23,373.85
SUMMARY:						
Balance, January 1, 1990		12,785.26				
Income through March 31, 1990		31,762.79				
		44,548.05				
Less Expenditures through March 31		23,373.85				
Balance, March 31, 1990		21,174.20				
Certificates of Deposit	$15,000					

SOUTHEASTERN LIBRARY ASSOCIATION MEMBERSHIP FORM 1990

The information in the address box below should be your preferred mailing address. Please return form with dues payment. Make check payable to: Southeastern Library Association. Mail to: SELA, P.O. Box 987, Tucker, GA 30085-0987.

Type of Library with which you are associated:

- ☐ A-College/University
- ☐ B-Library Education
- ☐ C-Public
- ☐ D-School
- ☐ E-Special
- ☐ F-Retired
- ☐ G-Other
- ☐ H-Exhibitor

- ☐ New Membership 19 ____
- ☐ Renewal 19 ____

Annual Dues Schedule
(Based on Annual Salary)

Membership Year
January 1-December 31

Type of Membership	Amt. of Dues	Amt. Paid
Any FIRST TIME Membership	$10.00	_____
$10,000 and Under (Includes Students, Trustees, Friends, Retired Members and Exhibitors)	$10.00	_____
$10,001 to $20,000	$15.00	_____
$20,001 to $30,000	$20.00	_____
$30,001 to $40,000	$25.00	_____
$40,001 and up	$30.00	_____
Sustaining Membership	$40.00	_____
Contributing Membership	$60.00	_____
Additional Section/Round Table	$ 4.00 ea.	_____
TOTAL AMOUNT PAID	$	_____

Name _____ / / _____
First Name Initial Last Name

Mailing Address _____
Street, Apartment, P.O. Box

_____

_____ _____
City State Zip Telephone: ☐ Home ☐ Business

Place of Employment _____

Position/Title _____

SECTION AND COMMITTEE/ROUND TABLE AFFILIATIONS

Pleae indicate Section/Round Table and Committee choices in priority order.

Your SELA membership includes affiliation in **TWO** (2) of the following **Sections/Round Tables.**

(A) Library Education
(B) Public Libraries
(C) Reference and Adult Services
(D) Resources and Technical Services
(E) School and Children's Libraries
(F) Special Libraries
(G) Trustees and Friends of Libraries
(H) University and College Libraries
(I) Library Instruction Round Table
(J) Junior Members Round Table
(K) Government Documents Round Table
(L) Online Search Librarians Round Table

If you wish to affiliate with more than TWO of the above, include $4.00 for each additional section affiliation.

MAXIMUM of FOUR (4) section affiliations.

***Section Membership Affiliation:** 1st Choice _____ 2nd Choice _____ 3rd Choice _____ 4th Choice _____

Committee(s) on which you have an interest in serving. Limit your selection to THREE (3).

(2A) Outstanding SE Author Award
(2B) Outstanding SE Library Program Award
(2C) Rothrock Award
(2D) President's Award
(3) Budget
(4) Committee on Committees
(5) Conference (Local Arrangements)
(6) Conference Site Selection
(7) Constitution and By-Laws
(8) Continuing Education and Staff Development
(25) Exhibits
(10) Handbook
(11) Headquarters Liaison
(12) Honorary Membership
(13) Intellectual Freedom
(24) Interstate Cooperation
(14) Legislative
(15) Library Development
(17) Media Utilization
(18) Membership
(19) Nominating
(21) Public Relations
(22) Resolutions
(23) Southern Books Competition

***Committee(s) Selection(s):** 1st Choice _____ 2nd Choice _____ 3rd Choice _____

Calendar

1990

August 15-18, 1990	TN	WHCLIST XI, Nashville, TN
October 11-13, 1990	WV	WVLA Annual Conference. Marriott Hotel. Charleston, WV
October 17-19, 1990	SC	SCLA Annual Conference. Columbia, SC. Radisson Inn
October 24-26, 1990	KY	KLA Annual Conference. Lexington, KY. Hyatt Regency
November 7-9, 1990	MS	MLA Annual Conference. Jackson, MS. Holiday Inn, Downtown
November 8-10, 1990	VA	VLA Annual Conference. Richmond, VA. The Marriott
December 4-8, 1990	TN	SELA/TLA Joint Conference. Nashville, TN. Opryland Hotel

1991

March 12-15, 1991	LA	LLA Annual Conference. Kenner, LA
March 20-23, 1991		PLA National Conference. San Diego, CA
April 9-12, 1991	AL	Alabama Lib. Assoc. Annual Conf. Tuscaloosa, AL. Sheraton Capstone Inn and Bryant Conference Center
May 6-10, 1991	FL	FLA Annual Conference. Twin Towers, Orlando, FL
October 2-4, 1991	KY	KLA Conference. Louisville, KY
October 23-25, 1991	MS	MLA Conference. Biloxi, MS
October 25-29, 1991	GA	GLA Biennial Conference. Savannah, GA
November 6-8, 1991	SC	SCLA Conference. Greenville, SC
November 7-9, 1991	WV	WVLA Conference. Greenbriar, Lewisburg, WV
November 13-15, 1991	NC	NCLA Conference. High Point, NC

1992

March 17-21, 1992		SELA/LLA, joint conference. New Orleans, LA
October 6-8, 1992	KY	KLA Conference. Ft. Mitchell, KY
October 16-18, 1992	WV	WVLA Conference. Holiday Inn, Parkersburg, WV
October 28-30, 1992	MS	MLA Conference. TBA

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Vice-President/President-Elect: Dr. Geraldine Bell, 3061 Wenonah Park Rd., Birmingham, AL 35211

Secretary: Edith Harwell, 2636 Buckboard Road, Birmingham, AL 35244

Treasurer: Wayne Kendrick, 1503 Sparkman, NW, #46, Huntsville, AL 35816

Florida Library Association

President: Linda O'Connor-Levy, Manatee County Public Library, 2312 Avenue C, #11, Bradenton Beach, FL 34217

Vice-President/President-Elect: Al Trezza, FSU School of Library and Information Studies, 2205 Napoleon Bonaparte Drive, Tallahassee, FL 32308

Secretary: Susan Gray Byrd, Miami-Dade Community College, South Campus Library, 11011 S.W. 104th Street, Miami, FL 33176

Treasurer: Charles E. Parker, State Library of Florida, R. A. Gray Building, Tallahassee, FL 32399

Executive Secretary: Marjorie Stealey, 1133 W. Morse Blvd., Suite 201, Winter Park, FL 32789

Georgia Library Association

President: Robert Richardson, Director, Duckworth Libraries, Young Harris College, P.O. Box 38, Young Harris, GA 30582

First Vice-President/President-Elect: Sharon Self, Hardaway High School, 2901 College Drive, Columbus, GA 31995

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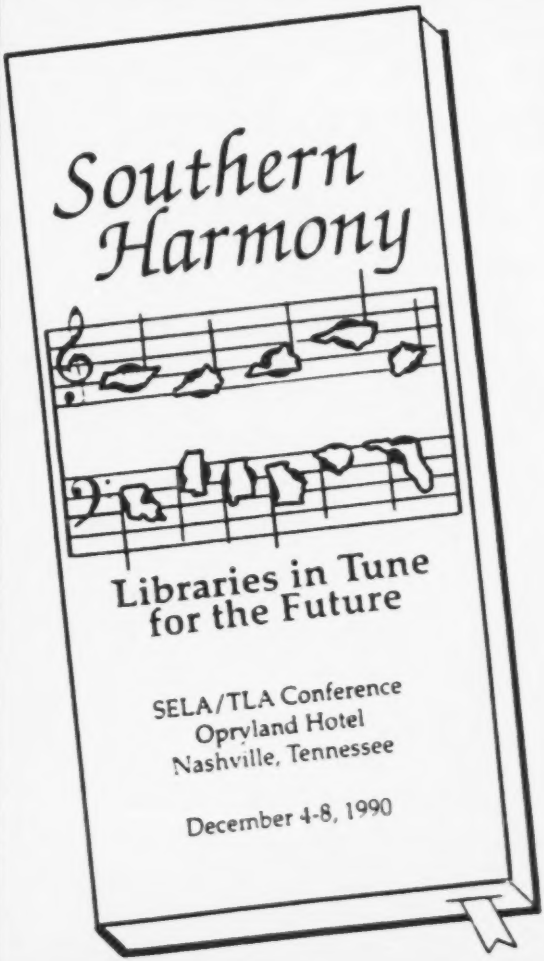

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